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LECTURES
ON THE
THEORY AND PRACTICE OF MEDICINE;
NOW IN COURSE OF DELIVERY AT THE
THEATRE OF ANATOMY AND MEDICINE, WEBB-STREET, SOUTHWARK.
BY
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&c., &c.

THE GANGLIONIC SYSTEM.—*Its cerebral portion. The internal ganglionic system.—Real office of the trigeminal and spinal ganglia. Effects of lesion of the fifth nerve. Detail of experiments.* PHYSIOLOGY OF THE NERVOUS SYSTEM.—*The senses. Functions of the brain; of the true spinal system. Approximation to the true theory by M.M. Magendie and Mayo.*

GENTLEMEN:—In my last lecture I *proved* to you that the vis nervosa of Haller, and the principles of the motions observed in certain experiments of Redi, Whytt, Blane, Legallois, &c., are *one and the same*; and I *demonstrated* that this principle, hitherto without *application* to science, has a most extensive domain in physiology and pathology.

85. I shall now proceed to treat of these subjects more particularly; but I must first notice, very briefly, another subdivision of the nervous system—the *Ganglionic*.

III. THE GANGLIONIC SYSTEM.

The ganglionic system consists of two parts.

86. The first of these is that situated amidst the organs of the face and head; it is chiefly connected with the *trifacial* nerve, and it comprehends *four* distinct ganglia, viz.:—

1. *The ophthalmic*, or *ciliary*.
2. *The rhinic*, or *nasal*.
3. *The otic*, or *auricular*.
4. *The glottic*, or *lingual*.

I subjoin a sketch of this part of the ganglionic system,

and I beg your attention to its various connections, not only with the trifacial, but with the nerves of the organs situated in the face, and with that part of the ganglionic system which I proceed to notice,—the *internal ganglionic*, or that designated the *grand sympathetic*, from an erroneous notion that upon it depended the extensive series of sympathetic actions which I have shown to be functions of the true spinal or excito-motory system; for, according to Professor Müller, "it explained everything and yet nothing."

87. The internal ganglionic system extends from the head to the pelvis. It consists of a series of ganglia and plexuses, connected together,—with each root of the successive pairs of spinal nerves,—and with all the viscera of the thorax and abdomen, by means of slender nerves. Of this portion of the ganglionic system a sketch is subjoined in next page.

88. But there are other ganglia besides those of the head and neck, and of the large cavities,—those formed upon the major portion of the trifacial, and upon the posterior

roots of the spinal nerves, and there is an interesting question, What is the office of *these* ganglia?

89. I *think* there is much reason for considering these ganglia as a part of the general ganglionic system, as constituting an *external* ganglionic system, for the formation and nutrition of the external limbs, and for certain secretions, as that of the lachrymal, the parotid glands, &c.

90. I would, therefore, propose to divide the ganglionic subdivision of the nervous system into—

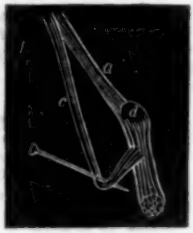
I. *The external*, comprising,
  1. *The fifth*;
  2. *The posterior spinal.*

II. *The internal*, comprising,
  1. *The sympathetic*;
  2. *The pneumogastric?*

91. The argument may be stated thus:—1. There is an internal nerve for formation, nutrition, secretion, &c. 2. This nerve is ganglionic. 3. There are external organs and structures requiring nutrition, &c. 4. There are also external ganglionic nerves. The inference is plain, that these constitute the external ganglionic sub-system.

92. The ganglia upon the nerves were first observed to be attached to the portio major of the fifth and the posterior spinal nerves, not, as Sir Charles Bell states, by Monro, but by Prochaska. This latter author observes, in the preface to a republication of his work in 1800:—"This treatise, which appeared in 1799, contains several new observations upon the nervous system." "Amongst these is the fasciculus of fibres of the fifth pair of the cerebral nerves, which *passes* the semilunar ganglion and *joins* the third, or inferior, maxillary branch of that nerve.

93. "Amongst these, too, are the anterior roots of all the spinal nerves, which, in like manner, *pass* the ganglia of the posterior roots of those nerves."



"On this subject many excellent works have appeared since the publication of my treatise, especially 'Observations on the Structure and Functions of the Nervous System,' by Monro (in 1783); 'Ueber das Organ der Seele,' by Soemmering, Königsberg, (in 1796); and 'Reilii Exercitationes Anatomicæ de Structura Nervorum'" (in 1797)."

94. I am not aware that any preceding inquirer has suggested the real office of the ganglia on the fifth and posterior spinal nerves. Prochaska asks (p. 363), "Who will assign the reason why the interior roots of the spinal nerves pass the ganglia, whilst the posterior roots join them? Why, of all the cerebral nerves, the fifth pair alone, after its origin, forms, in the manner of the spinal nerves, the semilunar ganglion, under which

the peculiar fasciculus of fibres passes, still in the manner of the spinal nerves, proceeding to *join* the third or inferior maxillary branch?"

95. It is true that the semilunar and external spinal ganglia differ in appearance from the ganglia of the sympathetic, as Sir Charles Bell has well displayed. What is the nature of this difference? To this question I find no reply in authors. It is plain, however, that the difference consists in their being, alone, *plexic*. The internal ganglionic nerve is purely nutrient; its ganglia are simple. The external involve sentient, and, I believe, excitory nerves, with the nutrient; they combine, therefore, the appearances of the plexus and of the ganglion.

96. But are there any other anatomical facts, any physiological and pathological facts, which lead us to think that the trifacial and spinal nerves, besides their other functions, possess a nutrient and secretory power? Indubitably there are.

97. 1.—The distribution of this nerve to the lachrymal, parotid, and submaxillary glands, can only be for secretion. I refer you, upon this point, to the beautiful Dissertation of Sig. Bellingeri.

98. 2.—The experiments of M. Magendie, in which division of the trifacial within the skull led to the destruction of the eye, can only be explained in this manner.

99. 3.—The cases of destruction or compression of the trifacial within the cranium, from disease of the human subject, are of the same character. Such a case is amply detailed by M. Serres. Such cases have occurred to Dr. Alison and Mr. Stanley, and these I shall quote at length.

100. "A remarkable circumstance connected with the affections of the fifth nerve, is the tendency to inflammation and sloughing in parts which have lost their sensibility, particularly in the eye. A very instructive case of this kind occurred to my friend Dr. Alison. The patient had loss of common sensation on the left side of the face, the left nostril, and left side of the tongue, with insensibility of the ball of the eye, and occasional bloody discharge from the left nostril, and was liable to attacks of pain occasionally accompanied with fever, during which the pain was chiefly referred to the insensible parts. There were frequently attacks of inflammation of the left eye, with dimness of the cornea, which were relieved, from time to time, by the usual antiphlogistic means; but at the end of two months, a line formed round the base of the cornea, which at length sloughed out, and the contents of the eye were entirely discharged. The muscles of the left side of the jaw were paralytic, and felt quite flaccid when the patient chewed or clenched the jaws, but the motion of the muscles of the cheek was unimpaired. After the destruction of the eye, the paralytic symptoms remained stationary for a year or more; there was then a violent return of headach with fever, and death, in a state of coma, after an illness of a fortnight. On inspection, there was found considerable ramollissement of some of the central parts of the brain. The fifth nerve of the left side, on being traced backwards from the ganglion, was found, close to the ganglion, to be of a very dense texture, but beyond this it was much wasted, and, at its junction with the tuber annulare, nothing but membrane seemed to remain. In another case of Dr. Alison's, there was loss of sensation of the left side of the face, followed by inflammation and sloughing of the eyeball; after which the sensibility of the parts returned. The patient was, before the appearance of these symptoms, and has since continued, liable to severe headach and epileptic fits. The loss of sensibility continued about six months.

101. "A remarkable combination of symptoms occurred in a case related by Mr. Stanley. There was hemiplegia of the left side, without loss of sensation in the arm and leg, but in the left side of the face both sensation and motion were entirely lost. In the left side of the tongue sensation was lost, but motion remained. The mucous membrane of the left nostril was always of a deep red colour, and there were frequent discharges of blood from it. The conjunctiva of the left eye became deeply injected; this was followed by opacity and ulceration of the cornea, and at last by total disorganisation of the eye. There was total loss of hearing in the left ear. There were frequent attacks of erysipelas, which were entirely confined to the paralytic parts of the face. The patient had been long affected with headach, and, at last, died two months after the commencement of the paralytic symptoms. A tumour was formed in the left side of the tuber annulare, which compressed the origin of the fifth and seventh nerves against the base of the skull. The tumour was the size of a walnut, and extended into the left crus cerebelli."—(*Abercrombie on the Brain*, 3rd ed., p. 424, &c.)

102. In a word, if the sensation of the face be lost by paralysis, arising from disease of the *brain*, the eye is safe; but if the same event occur from compression or destruction of the *fifth*, *within* the cranium, by disease, or in an experiment, the eye ceases to be nourished, and becomes destroyed. In the former case the nerve of sensation merely has suffered; in the latter the nerve of nutrition, as well as sensation, has been involved in the disease or injury.

103. 4.—I must draw your attention particularly to a branch of the trifacial nerve discovered by M. Arnold, and termed by him

the *recurrent* of the fifth. It is represented below :—

It returns from the ophthalmic branch of this nerve to be distributed between the laminæ of the tentorium. What can its function be, in this situation? It cannot be *touched*. It cannot, then, be for *sensibility*. It cannot be for *excited* motion. It can only be formation, for nutrition. Such, then, is the *probable* function of this nerve.

104. A series of experiments alone could determine whether the destruction of the ganglia on the posterior roots of the spinal nerves, would influence the nutrition of individual parts or limbs. Some of the cases of defective growth, development, and nutrition, in infants may depend upon disease, situated so as to interfere with the texture or function of these ganglia. Observation must elucidate this point.

105. 5.—The whole nervous system seems to have a certain influence over the action of the heart. According to the experiments of Legallois, and Dr. Wilson Philip, to *crush* the brain, or the spinal marrow, enfeebles or arrests the circulation. I have discovered that the same effect is produced by crushing the limbs, and this is doubtless effected through the medium of the ganglionic system.

106. A frog was made perfectly insensible by the application of laudanum or alcohol. Its respiration ceased. It did not move on the application of any irritant. The circulation in the web was carefully observed. When it had long continued in the same enfeebled state without change, the thigh was crushed. The circulation in the minute and capillary vessels ceased at once, and never returned. The stomach was now crushed in the same manner. The heart ceased to beat for many seconds; its beat then returned, but never regained its former force. The effect was precisely such as was observed by Legallois on crushing the spinal marrow. There was not the least indication of pain in either experiment.

107. The experiment was repeated. The result was so perfectly similar, that a note was written at the time, stating that the experiment need not be again repeated.

108. Nevertheless, it was repeated several weeks afterwards, with precisely the same results. The action of the spirit upon the cutaneous surface had arrested the respiration, destroyed all sensation, and induced considerable languor in the circulation in the web. When this state had continued uniform during a considerable time, the other limb was crushed by a hammer. There was not the slightest motion of the animal or expression of pain, so deep was the insensibility. The circulation in the whole web ceased instantly.

109. The spinal marrow being removed in an eel, the circulation became, at length, much enfeebled in the pectoral fin. The part one inch and a half below the heart was crushed; the circulation in the pectoral fin now ceased suddenly and entirely.

110. In an eel, in which the brain had been carefully removed, and the spinal marrow destroyed, the stomach was violently crushed with a hammer. The heart, which previously beat vigorously sixty times in a minute, stopped suddenly, and remained motionless for many seconds. It then contracted; after a long interval it contracted again, and slowly and gradually recovered an action of considerable frequency and vigour. No experiment can more clearly demonstrate the effect of violence inflicted upon the system generally. The experiment is the more remarkable because the connection and influence of the brain and spinal marrow were entirely removed. The organic structures must have been the medium through which the effect of the violence was conveyed to the heart.

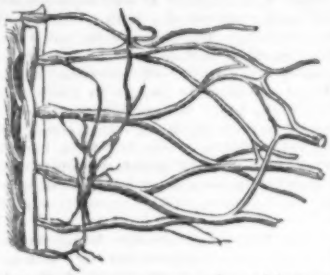
111. Similar events have occurred in surgical practice. A robust and healthy waggoner fell down, and the wheel of his heavy waggon passed over the abdomen. The beat of the heart was so enfeebled that the pulse could scarcely be felt. No reaction took place. The effect was perfectly similar to that of crushing a portion of the brain and spinal marrow. On examination the ileum was found lacerated in two places.

112. A man had his arm drawn in, and violently crushed, and torn off, by some machinery. The action of the heart failed, and never rallied.

113. Every one will remember the melancholy accident which occurred to the late Mr. Huskisson. The tremendous vehicle passed over the thigh. The action of the heart failed, and the surgeon waited for reaction—for an opportunity for amputation—in vain.

114. I will conclude these remarks by the following sketch, which shows the distinct

union of the *external* and *internal* ganglionic systems.



115. I must now resume the subjects of the first part of these lectures already enumerated § 83, viz.:—

1. *The anatomy;*
2. *The physiology;*
3. *The pathology;*
4. *The therapeutics, of the true spinal or excito-motory system;*

interposing, occasionally, observations upon the cerebral system.

116. It will prevent repetition if I begin with the *second* of these subjects, or the *physiology*, and then treat of the *first*, or the *anatomy*; for it is by physiological phenomena principally, if not entirely, that the anatomy has hitherto been pointed out. It is impossible through the medium of the irritation of *certain* portions of the nervous masses, to excite muscular contractions. It is impossible to apply the slightest stimulus to *other* portions of the nervous structures without inducing muscular contractions, directly or in a reflex manner. The former parts of the system *do* not belong to the excito-motory system; the latter *do*. Experiment has taken the place of the scalpel. It has traced the anatomy of the different portions of the nervous system. Whether the scalpel will ever be able to confirm the anatomical results from experiment, remains to be discovered.

I now proceed to treat of

I. The Physiology of the Nervous System.

117. In order to convey a distinct idea of my views of the nervous system at once, I shall begin by the detail of one experiment, and the performance of another.

118. A horse was struck with the poleaxe over the anterior lobes of the brain. It fell instantly, as if struck with a thunder-bolt; it was convulsed, and then remained motionless. It shortly began to breathe, and continued to breathe freely by the diaphragm.

119. When lacerated or pricked by a sharp or pointed instrument, as a *pin* or a *nail*, on any part of the face or surface of the body, it was totally motionless manifesting no evidence of sensation or volition.

120. When, on the other hand, the *eyelash* was touched with a *straw*, the eyelid was forcibly closed by the action of the *orbicularis*. When the cornea was touched, the eyeball revolved outwards by the action of the *abducens*. When the verge of the anus was touched, the *sphincter* contracted forcibly, the tail was raised, the vulva was drawn towards the anus.

121. The upper part of the medulla oblongata was now destroyed by an instrument passed through the orifice made by the poleaxe: there were violent convulsions; the respiration ceased, and the eyelid and eyeball remained motionless on the application of stimuli.

122. Now, I imagine that it will not be disputed, that the blow of the poleaxe, in this case, annihilated the cerebral or sentient and voluntary functions; and that a peculiar set of excito-motory phenomena remained. Deep lacerations produced no evidence of the former; the touch of a straw induced full manifestations of the latter. The destruction of the medulla oblongata removed all trace of excito-motory phenomena in the eyelid and eyeball.

123. You observe this living frog; its sentient and voluntary functions are obvious. I divide the spinal marrow, below the occiput, with these scissars: all is still. There is not a trace of *spontaneous* motion. The animal would remain in this very form and position, without change, until *all* signs of vitality were extinct. But now I pinch a toe with the forceps. You see how both posterior extremities are moved. All is now still again; there is no spontaneous motion, no *sign of pain* from the wound made in the neck. It is without sensibility—without volition; the *power* to move remains—the *will* is extinct. I now pinch the integument. You observe the result—the immediate recurrence of excito-motory phenomena.

124. I now destroy the whole spinal marrow with this probe. It is in vain that I pinch the toes; the animal, the limbs, are motionless!

125. Could the former *excited* motions be those of irritability? I will try the truth of this suggestion by seeing whether, now that the axis of the excito-motory system is destroyed, with its phenomena, the application of a slight galvanic shock will prove the subsistence of irritability. You see how instantaneously and forcibly the muscles are stimulated to contraction.

126. Is not the proof, from these experiments, of distinction between the motions of volition, of the excito-motory system, and of these from those of irritability, perfectly and unequivocally complete?

127. Similar phenomena are observed in the human subject. In a patient in deep coma, I pierced the skin on the cheek, the hand, the thigh, &c., with a pin; there was no manifestation of sensation—no motion

whatever. I then touched the eyelash and the *internal* nostril, with a feather; this induced action of the orbicularis and levator alæ nasi. I then pricked the exterior part of the nostril with the pin; the action of the levators was immediate. The respiration was almost entirely diaphragmatic. There was effusion in the ventricles; no other morbid appearances.

128. In these cases we had the *cerebral* functions annihilated,—the *true spinal*, or *excito-motory*, entire.

129. But I must now proceed more systematically with my lecture.

130. I shall not detain you long with the physiology of the cerebral subdivision of the nervous system: it embraces sensation, perception, judgment, volition, and voluntary motion.

131. The senses are, the smell, the sight, the hearing, the taste, and the touch; they convey to the mind all we know of the external world. Perception is derived from them. Volition is a subsequent mental act, and voluntary motion a frequent result; and thus the motions which result from sensation always *imply volition*; but as volition may exist without any previous sensation, the voluntary motions are frequently *spontaneous*. It is by this character that the motions which belong to the sentient and voluntary system are distinguished from those which belong to the excito-motory; these are never spontaneous, they are *always excited*. Even the motions of respiration, as far as they belong to this system, are excited motions, as I shall show immediately. Legallois, M. Flourens, and Sir Charles Bell, are equally in error, I think, when they consider the medulla oblongata as the *source*, the *primum mobile*, of the respiratory motions; it is the *channel* through which the excitors act, and the organ which *combines* the different movements which constitute the acts of respiration; but the true *source* of these movements are certain excitor nerves,—the excitors of respiration,—and principally branches of the pneumogastric, but also of the fifth and spinal nerves. Equally remote from the truth, I think, is the opinion of Dr. Philip and Mayo, that the acts of the respiration are entirely voluntary. This is, in fact, a mixed function, as *all* the acts of the excito-motory system may be, and although generally belonging to the excito-motory system, yet capable of being effected through the medium of volition. This subject will be pursued hereafter.

132. A point which belongs more immediately to our present subject,—the cerebral system,—is that of the influence of the senses over the acts of volition. There is a case of anæthesia, published by Dr. Yelloly, in the "Transactions of the Medico-Chirurgical Society," vol. iii. p. 99. The patient could hold a cup in her hand securely, if she kept her eyes fixed upon it; but if she ceased to look at it, it fell to the ground. I have this day seen a patient with a slight degree of paralysis of feeling and of voluntary motion in his lower limbs. He walks securely whilst his eyes are fixed upon the ground, but stumbles immediately if he attempts to walk in the dark. His own words are, "My feet are numb; I cannot tell in the dark where they are; and I cannot poise myself." The voluntary motions are regulated by the sense of touch, when this is unimpaired, or by that of sight, when the touch is paralysed.

133. Many attempts have been made to *localise* the functions of the cerebrum; that is, to prove certain functions to be attached to certain parts of that organ, without, however, much success. The facts supplied by pathology certainly lead us to the conclusion that the hemispheres of the cerebrum and cerebellum regulate the *voluntary* movements of the *opposite* side of the body, whilst the medulla oblongata and spinalis *convey* these acts of *volition* to the *corresponding* side. It has been asserted from similar facts, that the anterior lobes of the brain govern the speech; the corpora striata, the inferior extremities; and the thalami, the superior extremities; but I fear these deductions are not sufficiently substantiated. The same remark must be made relative to the supposed connection between the cortical portion of the cerebrum and the intellectual faculties, and the medullary portion and the movements. I shall revert to these opinions immediately.

134. The functions of the cerebral system are, then, sensation, perception, judgment, volition, and voluntary motion. The sensations are conveyed to the cerebrum by the sentient nerves,—the olfactory, the optic, the acoustic, the glosso-pharyngeal (?), and the trifacial and posterior spinal; the cerebrum itself may be viewed as the organ of mind, that organ on which the ψυχη sits, as it were, enthroned; the voluntary nerves convey the mandates of the volition to the muscles which are to be called into action. All these functions are strictly *psychical*. They imply consciousness. Sensation without consciousness appears to me to be a contradiction in terms; the idea and the phraseology should be banished from physiology.

135. The cerebral system *sleeps*, sensation is dull, volition quiescent; dreams, &c. are the delirium of sleep.

136. How different from those which I have thus enumerated, are the functions which belong to the true spinal marrow. In these there is no sensation, no volition, no consciousness, nothing psychical. An impression is made upon the extremity of a nerve; this impression is conveyed, not to the cerebrum, but to some part of the medulla oblongata, or medulla spinalis, whence it is reflected upon certain muscles

destined to be excited into consentaneous action.

137. The true spinal system is independent of the cerebrum, and subsists when the cerebral lobes are removed. It guards, as it were, the orifices and exits of the body, regulating the ingesta and the egesta.

138. The cerebral system is the seat of the intellect; the true spinal marrow is, in an especial manner, the organ of the emotions and passions. It is on this part of the nervous system that the preservation of the individual and the continuation of the species depend.

139. The cerebral system connects us with the external world in everything that relates to sensation and volition, or mind; the true spinal system, in everything that relates to the appropriation of its materials, or their expulsion,—in everything that, in those respects, relates to nutrition and reproduction.

140. The true spinal marrow, as distinguished from the *chord* of cerebral, sentient, and voluntary *nerves*, with which it is inseparably blended in structure, is the centre, or axis, of a distinct system of excitor and motor nerves, hitherto unknown to physiologists.

141. This excito-motory system of nerves presides over ingestion and exclusion,—over retention and egestion, and over the orifices and sphincters of the animal frame. It is, therefore, the nervous system of respiration and deglutition, and of the retention and expulsion of the fæces and urine, and of the semen.

142. By means of this system, that "*tourbillon*" of the ingesta and egesta, so beautifully and eloquently described by Cuvier, is effected. By means of this system the animal frame is constituted a casket, guarded at the upper part, and securely closed at the lower.

143. The excito-motory, or true spinal system, is the nervous agent in all those *motions* hitherto confessedly not understood, by the fact of their being designated by the unmeaning term *sympathetic*, &c.

144. This system is, also, the source of *tone* in the whole muscular system.

145. The true spinal system is, in a peculiar sense, the seat, or nervous agent, of the appetites and passions. Through it the emotions affect, not the expression of the countenance and the respiration alone, but the pharynx, the larynx, the sphincters, the expulsors, and indeed the whole muscular system of the animal frame.

146. The true spinal system is susceptible of *modification* by volition, and, on this account, some of its functions have been denominated *mixed*. It is, also, constantly under a certain influence of the volition, as is manifest in the difference in the respiration, &c., during intense mental attention, sleep, and coma, and in ordinary circumstances.

147. The true spinal system *never sleeps*; respiration and deglutition, the action of the orifices and sphincters, are continued.

148. That a principle so extensive and important in the animal economy should not have been detected and known before, must appear extraordinary; and that such is the fact, may be demonstrated by considering the most simple and familiar examples of the functions over which this principle presides. Has it been stated in any work, ancient or modern, that the deglutition of water by the pharynx, the exclusion of carbonic acid by the larynx, the retention of the urine and fæces by the sphincters, are exclusively functions of the *spinal marrow*, and of a peculiar *system* of *excitor* and *motor* nerves, of which it is the centre, or axis? I have looked, in vain, over the works of Dr. Bostock, Dr. Alison, and of Mr. Mayo; of M. Adelon and M. Magendie; and of Rudolphi and Professor Müller, for an account, or even a hint, of such a principle as that involved in these familiar acts.

149. Nay, the idea of a system of *excitor* nerves, constantly operating in the animal economy, preserving its orifices open, its sphincters closed, and constituting the *primum mobile* of the important function of respiration, I believe to be new. The acts are so familiar to us, that we have thought them understood, when the nervous agents through which they have been *excited*, have not even been detected; yet, that this view is the true one, is proved by the most decisive experiments.

150. The nearest approximation to the detection of this system, is to be found in relation to the closure of the eyelid on touching its borders. M. Magendie observes, "The movement, designated winking, depends partly on the facial nerve, and partly on the nerve of the fifth pair. It ceases when the facial nerve is cut; it ceases, or shows itself very rarely, and only by the effect of a direct solar ray, when the nerve of the fifth pair is divided. The loss of the movement of the eyelids by the section, or paralysis of the facial nerve, is easily understood, since this nerve sends filaments to the orbicular muscle. It is much more difficult to understand how the section of the fifth pair arrests the *winking*, for this nerve, almost entirely destined for sensation, sends no branch to the muscles which move the eyelids."—*Précis de Physiologie*, t. i., p. 51. Mr. Mayo observes, "The muscle which closes the eyelids is called the orbicularis palpebrarum; it is disposed for some breadth between the skin of the eyelids in concentric fasciculi. This muscle is supplied by the fifth nerve, and by the portio dura of the seventh, and is paralysed by the division of the latter. The fifth nerve and the seventh rise together; the fifth imparts sensibility to the eye, to the eyelid, and eyelashes; and the least irritation of these

whatever. I then touched the eyelash and the *internal* nostril, with a feather; this induced action of the orbicularis and levator alæ nasi. I then pricked the exterior part of the nostril with the pin; the action of the levators was immediate. The respiration was almost entirely diaphragmatic. There was effusion in the ventricles; no other morbid appearances.

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130. I shall not detain you long with the physiology of the cerebral subdivision of the nervous system: it embraces sensation, perception, judgment, volition, and voluntary motion.

131. The senses are, the smell, the sight, the hearing, the taste, and the touch; they convey to the mind all we know of the external world. Perception is derived from them. Volition is a subsequent mental act, and voluntary motion a frequent result; and thus the motions which result from sensation always *imply volition*; but as volition may exist without any previous sensation, the voluntary motions are frequently *spontaneous*. It is by this character that the motions which belong to the sentient and voluntary system are distinguished from those which belong to the excito-motory; these are never spontaneous, they are *always excited*. Even the motions of respiration, as far as they belong to this system, are excited motions, as I shall show immediately. Legallois, M. Flourens, and Sir Charles Bell, are equally in error, I think, when they consider the medulla oblongata as the *source*, the *primum mobile*, of the respiratory motions; it is the *channel* through which the excitors act, and the organ which *combines* the different movements which constitute the acts of respiration; but the true *source* of these movements are certain excitor nerves,—the excitors of respiration,—and principally branches of the pneumogastric, but also of the fifth and spinal nerves. Equally remote from the truth, I think, is the opinion of Dr. Philip and Mayo, that the acts of the respiration are entirely voluntary. This is, in fact, a mixed function, as *all* the acts of the excito-motory system may be, and although generally belonging to the excito-motory system, yet capable of being effected through the medium of volition. This subject will be pursued hereafter.

132. A point which belongs more immediately to our present subject,—the cerebral system,—is that of the influence of the senses over the acts of volition. There is a case of anæthesia, published by Dr. Yelloly, in the "Transactions of the Medico-Chirurgical Society," vol. iii. p. 99. The patient could hold a cup in her hand securely, if she kept her eyes fixed upon it; but if she ceased to look at it, it fell to the ground. I have this day seen a patient with a slight degree of paralysis of feeling and of voluntary motion in his lower limbs. He walks securely whilst his eyes are fixed upon the ground, but stumbles immediately if he attempts to walk in the dark. His own words are, "My feet are numb; I cannot tell in the dark where they are; and I cannot poise myself." The voluntary motions are regulated by the sense of touch, when this is unimpaired, or by that of sight, when the touch is paralysed.

133. Many attempts have been made to *localise* the functions of the cerebrum; that is, to prove certain functions to be attached to certain parts of that organ, without, however, much success. The facts supplied by pathology certainly lead us to the conclusion that the hemispheres of the cerebrum and cerebellum regulate the *voluntary* movements of the *opposite* side of the body, whilst the medulla oblongata and spinalis *convey* these acts of *volition* to the *corresponding* side. It has been asserted from similar facts, that the anterior lobes of the brain govern the speech; the corpora striata, the inferior extremities; and the thalami, the superior extremities; but I fear these deductions are not sufficiently substantiated. The same remark must be made relative to the supposed connection between the cortical portion of the cerebrum and the intellectual faculties, and the medullary portion and the movements. I shall revert to these opinions immediately.

134. The functions of the cerebral system are, then, sensation, perception, judgment, volition, and voluntary motion. The sensations are conveyed to the cerebrum by the sentient nerves,—the olfactory, the optic, the acoustic, the glosso-pharyngeal (?), and the trifacial and posterior spinal; the cerebrum itself may be viewed as the organ of mind, that organ on which the ψυχη sits, as it were, enthroned; the voluntary nerves convey the mandates of the volition to the muscles which are to be called into action. All these functions are strictly *psychical*. They imply consciousness. Sensation without consciousness appears to me to be a contradiction in terms; the idea and the phraseology should be banished from physiology.

135. The cerebral system *sleeps*, sensation is dull, volition quiescent; dreams, &c. are the delirium of sleep.

136. How different from those which I have thus enumerated, are the functions which belong to the true spinal marrow. In these there is no sensation, no volition, no consciousness, nothing psychical. An impression is made upon the extremity of a nerve; this impression is conveyed, not to the cerebrum, but to some part of the medulla oblongata, or medulla spinalis, whence it is reflected upon certain muscles

destined to be excited into consentaneous action.

137. The true spinal system is independent of the cerebrum, and subsists when the cerebral lobes are removed. It guards, as it were, the orifices and exits of the body, regulating the ingesta and the egesta.

138. The cerebral system is the seat of the intellect; the true spinal marrow is, in an especial manner, the organ of the emotions and passions. It is on this part of the nervous system that the preservation of the individual and the continuation of the species depend.

139. The cerebral system connects us with the external world in everything that relates to sensation and volition, or mind; the true spinal system, in everything that relates to the appropriation of its materials, or their expulsion,—in everything that, in those respects, relates to nutrition and reproduction.

140. The true spinal marrow, as distinguished from the *chord* of cerebral, sentient, and voluntary *nerves*, with which it is inseparably blended in structure, is the centre, or axis, of a distinct system of excitor and motor nerves, hitherto unknown to physiologists.

141. This excito-motory system of nerves presides over ingestion and exclusion,—over retention and egestion, and over the orifices and sphincters of the animal frame. It is, therefore, the nervous system of respiration and deglutition, and of the retention and expulsion of the fæces and urine, and of the semen.

142. By means of this system, that "*tourbillon*" of the ingesta and egesta, so beautifully and eloquently described by Cuvier, is effected. By means of this system the animal frame is constituted a casket, guarded at the upper part, and securely closed at the lower.

143. The excito-motory, or true spinal system, is the nervous agent in all those *motions* hitherto confessedly not understood, by the fact of their being designated by the unmeaning term *sympathetic*, &c.

144. This system is, also, the source of *tone* in the whole muscular system.

145. The true spinal system is, in a peculiar sense, the seat, or nervous agent, of the appetites and passions. Through it the emotions affect, not the expression of the countenance and the respiration alone, but the pharynx, the larynx, the sphincters, the expulsors, and indeed the whole muscular system of the animal frame.

146. The true spinal system is susceptible of *modification* by volition, and, on this account, some of its functions have been denominated *mixed*. It is, also, constantly under a certain influence of the volition, as is manifest in the difference in the respiration, &c., during intense mental attention, sleep, and coma, and in ordinary circumstances.

147. The true spinal system *never sleeps*; respiration and deglutition, the action of the orifices and sphincters, are continued.

148. That a principle so extensive and important in the animal economy should not have been detected and known before, must appear extraordinary; and that such is the fact, may be demonstrated by considering the most simple and familiar examples of the functions over which this principle presides. Has it been stated in any work, ancient or modern, that the deglutition of water by the pharynx, the exclusion of carbonic acid by the larynx, the retention of the urine and fæces by the sphincters, are exclusively functions of the *spinal marrow*, and of a peculiar *system* of *excitor* and *motor* nerves, of which it is the centre, or axis? I have looked, in vain, over the works of Dr. Bostock, Dr. Alison, and of Mr. Mayo; of M. Adelon and M. Magendie; and of Rudolphi and Professor Müller, for an account, or even a hint, of such a principle as that involved in these familiar acts.

149. Nay, the idea of a system of *excitor* nerves, constantly operating in the animal economy, preserving its orifices open, its sphincters closed, and constituting the *primum mobile* of the important function of respiration, I believe to be new. The acts are so familiar to us, that we have thought them understood, when the nervous agents through which they have been *excited*, have not even been detected; yet, that this view is the true one, is proved by the most decisive experiments.

150. The nearest approximation to the detection of this system, is to be found in relation to the closure of the eyelid on touching its borders. M. Magendie observes, "The movement, designated winking, depends partly on the facial nerve, and partly on the nerve of the fifth pair. It ceases when the facial nerve is cut; it ceases, or shows itself very rarely, and only by the effect of a direct solar ray, when the nerve of the fifth pair is divided. The loss of the movement of the eyelids by the section, or paralysis of the facial nerve, is easily understood, since this nerve sends filaments to the orbicular muscle. It is much more difficult to understand how the section of the fifth pair arrests the *winking*, for this nerve, almost entirely destined for sensation, sends no branch to the muscles which move the eyelids."—*Précis de Physiologie*, t. i., p. 51. Mr. Mayo observes, "The muscle which closes the eyelids is called the orbicularis palpebrarum; it is disposed for some breadth between the skin of the eyelids in concentric fasciculi. This muscle is supplied by the fifth nerve, and by the portio dura of the seventh, and is paralysed by the division of the latter. The fifth nerve and the seventh rise together; the fifth imparts sensibility to the eye, to the eyelid, and eyelashes; and the least irritation of these

parts calls into action the orbicularis palpebrarum, which receives its stimulus through the portio dura of the seventh."—*Outlines of Physiology*, 3rd edit., p. 307. These two eminent physiologists are at variance in their anatomy, but obviously attach importance to the question of the distribution of the fifth to the orbicularis itself, so excluding the very idea of a reflex action. The former confesses the difficulty of explanation of the phenomenon; the latter attaches importance to the identity of *origin*, referring the phenomenon to some "consent" between the two nerves, an opinion controverted with perfect success by Dr. Alison and Professor Müller. (*Trans. of Med. Chir. Soc. of Edinb.*, vol. ii., p. 165, and *Outlines of Physiology*, 1833, p. 269. *Hanbuch der Physiologie*, 689.) Neither Mr. Mayo nor M. Magendie appears to see that the act involves a reflex, excito-motory agency, carried on through the medium of the true medulla, a fact which is proved by experiments in which the fifth pair of nerves, the medulla, and the seventh pair of nerves, are respectively divided. The central and connecting link between the two nerves, as between the excitor and motor nerves of the true spinal system generally, and in the acts of ingestion and egestion, of the orifices and sphincters, is overlooked.

LECTURES
ON
MATERIA MEDICA AND THERAPEUTICS;
NOW IN COURSE OF DELIVERY
AT THE
WINDMILL-STREET SCHOOL OF MEDICINE.
BY
GEORGE G. SIGMOND, M.D.

CANELLA ALBA.—*Botanical description of the tree. Cortex Winteranus. Properties and preparations of the bark.* CORNUS CIRCINATA.—*Preparations used; extract; tincture. Medicinal virtues of the cornus.* SMILAX SARSAPARILLA—*Different opinions regarding its efficacy. Difficulty of procuring it pure. Characters of the spurious species. Description of true Smilax. Quantities imported from Vera Cruz.*

CANELLA ALBA, WHITE, OR LAUREL-LEAVED CANELLA, AND CORTEX WINTERANUS, WINTER'S BARK.

GENTLEMEN:—The bark of the canella is slightly tonic, but it is principally employed as an aromatic; it disguises the powerful and disagreeable taste of the strong bitters; it warms the stomach, and prevents the griping consequent upon the administration of some of our potent remedies. The medical men of the past generation esteemed it for this quality very highly, and in the preparation of one of the favourite old remedies to which they gave the name of hiera picra, the sacred bitter; they gave up cinnamon, zedoary, asarum, cardamom seeds, saffron, and cochineal, which were in combination with aloes, and in their place introduced canella; and the dispensatory assigned as a reason that this article was found, upon trial of a great many others, most effectually to cover the ill-flavour of the aloes, at the same time that the quantity, sufficient to effect this, communicates to the medicine the same degree of warmth as the aromatics in the old form. I do not think that the bark enjoys much reputation at the present day, though it may occasionally be prescribed as a useful adjunct to other medicines. The canella is a tree of very common growth in the West Indies and in South America; it seems by many to have been confounded with the wintera aromatica, the bark of which has been highly spoken of as a carminative, an antiscorbutic, and tonic, but which is not familiar to us in practice. The Wintera was quite unknown in Europe until the return of Captain John Winter, who, in the year 1577, sailed with Sir Francis Drake, as commander of a ship called the *Elizabeth*, destined for the South Seas, but immediately after they had got through the Straits of Magellan, Captain Winter was obliged, by the stress of weather, to part company, and to return into the Straits, from whence he returned into England in June, 1759, and brought with him several pieces of this aromatic bark, which Clusius, in his "Exoticæ," calls after him cortex Winteranus, or Winter's bark. The description given by that botanist served as the guide of others, but nothing threw any light upon the subject, although all the navigators who passed through the Straits of Magellan were struck with the antiscorbutic powers of the tree until Mr. George Handasyd came back from the Straits of Magellan, 1691, and brought with him some dried specimens, which he gave to Sir Hans Sloane, and which are now in the Hortus Siccus of the *British Museum*; from these Sir Hans Sloane drew up a history, and gave a drawing of it in the "Philosophical Transactions." Notwithstanding this the canella alba usurped the name of Winter's bark, and though very unlike it in its external appearance and all its characteristics, both sensible and medicinal, although the produce of a different tree and brought from a different part of the world, it was confounded by some of the most respectable writers on the materia medica, and some of our first botanists, until Dr. Fothergill gave, in the fifth volume of the "Medical Observations and Inquiries," a paper on the subject, and a botanical description of the cortex Winteranus by Dr. Solander.

This gentleman had, with Sir Joseph Banks, had an opportunity of making some observations on the Wintera, during his stay in Terra del Fuego, in the Straits of Le Maire; it struck him that the trees there were less stinted in their growth, and had larger leaves than those growing in the Straits of Magellan, which he attributes to the high winds; besides this, he had the opportunity of examining specimens which Captain Wallis, and the officers of the *Dolphin*, brought to England with them in 1768. It appears that the Wintera is one of the largest forest trees upon the Terra del Fuego, often rising to the height of fifty feet; its outward bark is, on the trunk, grey, and very little wrinkled; on the branches quite smooth and green; the branches spread upwards and form an elegant head of an ovai shape; the leaves are of an oval elliptic shape, of a thick leathery substance, evergreen, without any nerves, and their veins scarcely visible, they are from three to four inches long on short footstalks; it has no calyx, but in its place the flower is surrounded with a spathaceous gem, of a light leathery substance, green; the corolla consists of seven petals, which are oval, obtuse, concave, erect, white, and have small veins; they soon drop off; the filaments are from fifteen to thirty; the antheræ are large, oval, divided into two; the germina are from three to six, placed above the receptacle somewhat higher than the stamina; they have no styles, but terminate in a stigma, which is divided into two or three small lobes, each germen becomes a separate seed vessel of a thick fleshy substance and unilocular. The bark which the original discoverers praised as one of the best antiscorbutics is found in the market in pieces three or four inches square, of different degrees of thickness, from a quarter to three quarters of an inch; it is of a dark-brown cinnamon colour, an aromatic smell if rubbed, and of a pungent, hot, spicy taste which is retained on the palate some time, although slowly imparted. For a more detailed description I must refer you to the paper from which I have taken the description of the plant, for in Dr. Fothergill's paper you will find all that has served as the guide to the natural history of this tree for the writers on materia medica. The canella tree seldom rises above fifteen feet in height, the branches are erect, and furnished with petioled leaves, very like the common laurel, the bark is white, and hence speedily recognised in the woods, the flowers which grow at the extremities of the branches in clusters are upon divided footstalks, small, of a violet colour. The calyx has five petals, which is persistent; the petals are five times as long as the calyx; the stamens are monadelphous; the filaments form a nectary, to the outerside of which the anthers adhere; the germen is within the tube called the nectary; the style is cylindrical, with three stigmas; the fruit is an oblong, fleshy, three-celled black berry; the seeds are one or two, and exalbuminous. The bark of this tree is brought to us in casks, and in cases, for the most part in whitish-yellow quills, though there are flatter pieces, somewhat thicker, of a rather darker colour.

The odour of the quills is agreeable, aromatic, as is their taste. Alcohol extracts their virtues, as does the infusion, but this has less of warm, pungent, and bitter property. Analysis has shown that there may be obtained from them resin, volatile oil, extractive and colouring matters, gum, amidon, albumen, the acetates of potash and lime, hydrochlorate of potash, and hydrochlorate of magnesia. The berries are made into a liqueur at Martinique, which is highly prized, and it is said that the pigeons which feed upon them acquire a striking aromatic flavour which renders them very acceptable to the epicure.

CORNUS CIRCINATA — ROUND-LEAVED DOG-WOOD. CORNUS FLORIDA—DOG-WOOD.

The corneæ, or the dog-wood tribe, contain some species which, in North America, are prized most highly, one of which only has been much imported into this country, the cornus circinata, or round-leaved cornel, which was laid some time since before the *Medico-Botanical Society*, and has been tried with the greatest success as a tonic. Barton, Zollickoffer, and the best writers on the materia medica of the United States, bear the highest testimony in favour of the bark of some of these trees, nothing having been found by them so effectually to answer the purposes of Peruvian bark in intermittent fever. The common dog-wood is one of the most beautiful shrubs of the United States; it flowers early in the spring, and some of the southern tribes were accustomed, in consequence of its flowering with such regularity, to name the spring season from it. Barton states that it has long been used in intermittent fever, and many of the malignant fevers of the country. The round-leaved cornel is known in many parts of America by the name of white rind and mountain willow. It is a shrub of eight or ten feet in height; its leaves are nearly round, and broad, white, and downy beneath, and waving at the edges; the flowers are white; calyx, monophyllous, four-toothed; petals, four; stamina, four; pistil, one; fruit, an inferior drupe. The bark has a wrinkled appearance; it is in very small strips, is very thin. When it has been powdered it assumes a reddish colour, has an agreeable aroma and a grateful bitter taste, though by no means strong.

Professor Ives has advised that an extract should be made by spontaneous evaporation of the expressed juice of the green bark, dried on glass by solar heat; the dose of this,

to which the name of the extract of the cornus circinatus was given, is from five to ten grains, in the form of a pill, or dissolved in white wine. This extract has been sent to this country, and is decidedly a very valuable tonic. Mr. Carpenter, of St. Croix, a scientific chemist, has subjected the round-leaf cornel to analysis, and from this it appears that the constituent proximate principles of the round-leaf cornel are, tannin, gallic acid, resin, gum, mucilage, oil, and a peculiar saline matter, which differs from the salt discovered in the species florida (cornus florida), in possessing less bitterness and more astringency. With water the bark of the round-leaf cornel produces a deep red colour. Proof spirit forms with it a beautiful tincture, and dissolves the largest portion of the active principles: it may consequently be considered as its best menstruum. The tincture furnishes, on evaporation, a dark red extract, which possesses, in a concentrated degree, all the bitterness and astringency of its bark. To alcohol the cornel imparts the same appearance as to water. The alcoholic solution, when concentrated by evaporation, is rendered milky by the addition of water, and a precipitate is formed. The extract digested in ether is partially dissolved, and the solution, on evaporation, furnishes a compound of resin, oil, and a small portion of a peculiar saline matter. This compound appears, from its sensible characters, to constitute the most active portion of the article. The extract, made by evaporating the cold infusion, either of the root, or of the small branches of the round-leaf cornel, in water, by steam, or *in vacuo*, contains all its medicinal virtues in great perfection. The watery infusion reddens tincture of litmus. Muriatic acid forms a yellow flaky precipitate with it. Acetate of lead in solution occasions a quick and copious precipitate. A solution of tartar emetic is rendered turbid, and slowly precipitates. Sulphate of iron renders it turbid, and immediately afterwards changes it to a bluish-black colour, and produces a very light precipitate. With lime-water a very copious precipitate is formed, leaving the supernatant fluid almost colourless. Sulphuric, nitric, tartaric, prussic, and acetic acids have been severally tried, but evince no action on the infusion. The solution of ammonia causes no precipitate, but the infusion assumes a deeper red colour.

This medicine is now admitted into the Pharmacopœia of the United States, and has been very strongly designated by some of the physicians there as "the natural tonic of the human stomach;" and Dr. Ives, of New York, says that his experience in the use of the round-leaf cornel, has been sufficient to persuade him that "it is a pleasant and powerful tonic, and that there are cases in which it is preferable to any other vegetable belonging to the class of tonics." My own experience is decidedly favourable, and I have, from the high recommendations with which it was sent to the *Medico-Botanical Society*, been induced to try it, and the success which followed its use has fully borne out the testimonies which were advanced. The cases in which it has been found most serviceable, are those in which the tone of the stomach has been impaired from an indulgence in ardent spirits, in rich food, and where there is muscular debility. It seems to invigorate the system by some peculiar action upon the fibres of the tissues of the stomach without producing astringency. It is of a restorative character; hence in the debility of stomach, attendant upon old age, I find it the best remedy that can be prescribed. It produces no nervous excitement, yet it exhilarates the spirits and diffuses a cheerfulness. It is altogether an efficacious and mild tonic. Zollickoffer, in his "Systematic Arrangement of the Materia Medica of the United States," observes that it is nearly allied to the cinchona cordifolia of Mutis, or yellow bark. His own professional experience, however, leads him to prefer the florida. It is said that in the recent state it produces some degree of action upon the bowels. A pamphlet on this plant has been written in this country, which appears principally to be taken from the medical journals of North America; it seems to have been written with a view to the introduction of this remedy, but I believe it never met with much encouragement, for I find that it is difficult to procure it in the market.

A decoction of the cornel is made by boiling gently an ounce of the bruised bark in a pint and a half of water, till reduced to a pint; of this a wine-glass is a dose. A saturated tincture is made by macerating three ounces of the bruised bark in two pints of proof-spirit; the dose is from one to two teaspoonfuls in infusion of gentian, of cloves, or any mild infusion. This has been called from its invigorating the debilitated stomach, and increasing the appetite, the "Epicure's Tincture." These medicines will prove useful and efficacious tonics, and I am certain you will find that you have added another to that most important class of therapeutic agents, when you have acquired a knowledge of the powers of the round-leafed cornel in indigestion, in the debility of old age, and the affections to which, at a particular period of life, females are more or less liable.

SARZA SMILAX, SARSAPARILLA, SMILAX OFFICINALIS.

This is one of the most important and valuable drugs we possess, yet such has been the carelessness with which it has been treated by its importers, that the medical profession is by no means unanimous

either as to the diseases in which it is to be given, or the efficacy of the different preparations that are to be obtained from it. I am firmly persuaded that there is no article of the materia medica more useful, and none so applicable to a vast number of diseases as is the sarsaparilla, yet I could furnish you with instances of the most perfect incredulity of some of our most distinguished physicians and surgeons as to its possession of the slightest medicinal power. Some time since at *St. George's Hospital*, where undoubtedly there have been, from time to time, medical officers of the highest rank of talent, and of the greatest experience, a discussion arose as to the expediency of giving to the patients some particular medicines which were stated to be too expensive, and likewise uncertain in their effects, and some charges were brought against that establishment for its outlay upon drugs, which, so far from being proved, redounded to the honour of the institution. Amongst other articles canvassed by the Boards of Governors, was sarsaparilla; the discrepancy of opinion as to its utility was somewhat startling, and a person unacquainted with the real state of the drug market, and of the causes of the prejudices against this particular agent, would naturally be astonished at the totally opposite conclusions to which the most experienced and the most inquiring minds had come. The physicians and surgeons all entertained different views on the subject, and although the majority was in favour of the medicine, the minority was sufficiently distinguished to excite in the minds of the community a suspicion of the uncertainty of our science. I believe now that the causes of the failure of this drug are very sufficiently understood, yet I doubt very much that we have acquired all the knowledge necessary to extract from it those virtues which are most decidedly inherent in it, and which have given to true sarsaparilla a character all over the continent of South America. The great error has been a want of careful attention to the species of smilax from which the sarza has been given, and a knowledge of the best drug which comes into our markets. All sorts of trash are sold under the name of sarsaparilla, and it is actually sometimes sold in our own home market cheaper than it can be purchased either at Angustura or Grand Para, where is best obtained the real sarza del Rio Negre. It must be borne in mind, too, that the importation varies exceedingly. You will find in the "Medical Gazette" a very useful analysis of sarsaparilla from different foreign markets, made by my friend Mr. Battley, from which you will perceive that Jamaica sarsaparilla was formerly very superior to that with which the market is now supplied. In the year 1822 one pound of Jamaica sarsaparilla yielded six unces of pharmaceutical extract: at present it rarely yields more than four ounces. Formerly there were only three varieties met with here, now we have them from Jamaica, from Honduras, Vera Cruz, Lima, and Lisbon; and within a very short time we have had some from Sierra Leone, and likewise some has been imported from Bombay; all of these differ from each other in their external character and appearance.

The Vera Cruz and the Lima sarsaparilla are nearly alike; the roots are in slender twigs, in bundles, about the thickness of the common quill, having a wrinkled surface, a thin bark easily separated; that from Jamaica is very similar, but it has a reddish cuticle, and is frequently covered with minute fibres; it is commonly called red, or bearded. It is not quite so slender as the other varieties, nor is it imported with the chump so commonly. The Honduras is composed of very long roots, often doubled, has a wrinkled surface. The Lisbon root comes originally from the Brazils; it has a smooth, dirty-brown cuticle, and contains, both in the bark and pith, a very large quantity of starch. That which is brought from the East Indies resembles the roots of ipecacuanha; the roots are much twisted, and have a rugged appearance; the bark is of a brown colour, thick, hard, and brittle, and when bruised in a mortar readily breaks off, leaving a tough, woody centre, without any pith. That which comes from Sierra Leone is altogether of a different texture; it is formed of smooth and flaccid fibres, having a brown leathery bark, surrounding a very thin woody centre, and arising from a solid mass, which is called the chump. These roots are split, and cut into small pieces, for use; you find them, then, internally white, with a small woody centre; they are flexible, tough; the bark is marked with longitudinal furrows. There are two spurious kinds of sarsaparilla, called the red and the gray. The red, according to Virey, belongs to the family of the asphodels; and another, which is known uader the name of the spurious red, is the root of the agave cubensis; the other, or gray sarsaparilla, bears a very strong resemblance to that which comes from Brazil, the root of the aralia medicaulis; it is dotted with purplish spots, and it is without that wide woody centre by which the true sarsaparillas are all distinguished.

Of the smilaceæ, or smilax tribe, of which the medicinal smilax sarsaparilla is a member, some possess very considerable virtue, and are marked by their tonic alterative, diuretic, and demulcent properties. The name smilax was given by Dioscorides to different climbing plants, but the smilax of that writer is described by him as a deleterious plant, producing disturbed sleep; but the smilax aspera he speaks of as a preventive to poison, and therefore ranks it amongst the alexipharmica; he

says that there is a tradition, that if it be given to a new-born infant no poison can afterwards influence it. The smilax China is employed as a medicine in the Chinese province of Ho Nansi, where it abounds; it is also used for rice. It was brought into Europe in the 16th century, and was introduced for the same purposes as the smilax sarsaparilla. It acquired some reputation in the venereal disease, and for cutaneous and rheumatic disorders. Browne says that this plant is commonly found in Jamaica, and expresses his opinion that it might be cultivated there, and that it would be found a very valuable substitute for the sarsaparilla. Seven or eight years since Dr. Ashbourne and Mr. Belinaye brought the smilax aspera before the profession, and gave the result of their experience. The smilax aspera is a native of the south of France, of Italy, Spain, and of Syria; and in the south of Europe the roots are often sold for those of sarsaparilla; they have a certain degree of efficacy, but are very inferior; they may be distinguished by being much larger, by being more porous, much less compressed. Humboldt found twelve new species of smilax in South America; amongst these the syphilitica of the Cassequiaire, and the officinalis of the River Magdelena, are the most valued, from their possessing medicinal powers to a considerable extent.

Dr. Hancock found six or eight species of smilax growing in the woods of Guiana, but not one had the taste or the sensible qualities of the genuine medicinal sarza; he found that the inhabitants of those countries from which it was exported, gathered the roots from all the different species, and even from some other plants of different families. He says that till a very recent period the people of Essequibo mistook for sarza even the pendant fibres, not roots, of a species of climbing arum, with large heart-shaped leaves; and, however gross the error, he found certain medical practitioners there, indulging in the belief of its being the genuine drug. The specific name of our species is derived from the Spanish zarza, a brier, or bush, and parilla, a little vine, which latter it obtains from its being a climbing plant. The following is the description given by Dr. Woodville, and which appears to be confirmed by all travellers who have examined this interesting plant. The root is divided into several branches, which are somewhat thicker than a goose-quill, straight externally, brown internally, white, and three or four feet in length; the stems are shrubby, long, slender, climbing by means of tendrils, like those of our bryony, a little zig-zag, roundish, with about four slight unequal angles, and beset with strong scattered, awl-shaped, hooked prickles. The leaves are elliptical, or ovate, and when full-grown are nearly orbicular, two inches and a half broad, alternate, abrupt, or contracted at each extremity, with a short terminal point, smooth, of a deep green colour above, somewhat glaucous beneath, and marked with three short prominent ribs; the footstalks are short, broad, and channelled, each furnished with a pair of long tendrils, subsequently deciduous. The flowers are male and female, upon different plants, lateral, and usually stand three or four together, on slender axillary racemes, longer than the footstalks. The calyx of the male flower is bell-shaped, divided into six segments, which are oblong, spreading, and reflexed at their points; the filaments are six, simple, and bearing oblong anthers. The calyx of the female flower is deciduous, and also bell-shaped, similar to that of the male; there is no corolla, unless the calyx be considered as such, which, from analogy to asparagus, it ought to be. The germen is superior, ovate, supporting three minute styles, with oblong, reflexed stigmas; the fruit is a round, three-celled berry, the size of a currant, umbilicated, of a red colour, and containing a solitary seed in each cell, one or two of them generally abortive. The roots are collected with great care, and dried, and collected for exportation at the different ports. According to Humboldt, nearly 5000 quintals are annually exported from Vera Cruz. Wherever there is any communication with the Orinooko, the Amazon, and the Rio Negre, the trade is carried on with great industry, and it is considered an article of the greatest importance in commerce; and, as I shall in my next lecture take occasion to show you, it ought to be the subject of great attention on the part of the collectors and merchants, for, employed with proper management, it is one of the blessings to be obtained from the vegetable treasures with which our globe abounds.

ON THE

RESECTION OF THE FACIAL BONES.

By Professor DIEFFENBACH, *of Berlin.*

(Communicated by the Author.)*

THE resection of degenerated bones of the face, or the excision of tumours situated between them, belongs to the class of the most formidable operations. It is only in modern times that these operations have been performed to any great extent, and to Professor Saeger, at Erlangen, belongs especially the great merit, not only of having zealously collected all that had been done in this respect, but of having recommended the resection of diseased bones in a great many cases, and having executed himself a variety of the most important and ingenious

* We have not deemed it necessary to correct the very few idiomatic forms of expression which occur in the Professor's communication.

operations of this kind. I add to his rich experience some cases from my own observation, the number of which, however, is not great, as I began to attempt the extirpation of diseased parts of the upper jaw, and other facial bones, only a few years since, though I had performed long before, the resection of other bones. Some minor resections of the alveolar process met with success, and gave me confidence for greater operations, in which the success I met with was no less satisfactory.

Case I. The first patient from whom I removed an osteosarcomatous degeneration of part of the alveolar process, was a man 38 years of age. There was a fungous softening, of the size of a small hazel-nut, on the alveolar process of the left side, which surrounded the small incisor. The tooth was loose in the fungous mass, and blood oozed at its sides. I excised with a small saw the diseased part of the bone, in the form of a wedge, and touched the remaining bones with the incandescent iron. Some splinters of the bones having afterwards exfoliated, the wound furnished healthy granulations. In six weeks the depression having greatly diminished in its size, was covered with a smooth scar, and the man was cured without relapse.

Case II. I resected from a woman, 38 years of age, who likewise suffered with an osteosarcoma of the alveolar process, which had attained the size of a walnut in the space of a year, the alveolar process, with one molar, one eye-tooth, and one incisor. In this case, also, I made use of the incandescent iron after the operation, for the purpose both of stopping bleeding and procuring exfoliation. After two months the cure was complete, and no relapse followed.

Case III. I excised, from a woman 46 years of age, on account of an osteosarcoma, of the size of a walnut, a part of the upper jaw, containing two incisors, and the left eye-tooth. The incandescent iron having been used, afterwards some fragments of bones were exfoliated, and the cure followed with a smooth cicatrice.

Case IV. A lady, 46 years of age, was afflicted with a hard dark-blue sarcoma, which originated by degrees, and surrounded the roots of two incisors. I excised the morbid part of the bone, and touched the wound with the iron. The operation was successful, and no relapse followed.

Case V. A delicate young woman, 24 years old, had been suffering for three or four months under an osteosarcoma of the size of a large walnut. It occupied the place of three teeth. I resected it in the form of a wedge as high as the antrum highmorianum, and along the hard palate, on account of the bones there being found softened. The incandescent iron was applied to the wound, and the cure was complete in six weeks. The case is a recent one, and no relapse has yet followed.

Case VI. A young, delicate, fair girl, 24 years of age, suffered under a softening of the alveolar process of the upper jaw, which was developed in the space of a year. She had used, in vain, many external and internal remedies; a loose molar tooth had been extracted, the surrounding part of the fungous substance excised; the surface of the wound was burned, but without success. The progress of the disease was only the more rapid, and was about to affect the zygomatic bone. The teeth projected only by the upper part of the crown from the fungous mass, which was especially developed towards the roof of the mouth. In seizing them with the fingers they felt loose, and the blood oozed out at their sides. Without dividing the external parts of the face, I resected in this case the whole left alveolar process to the incisors, passing with a small saw through the healthy bone, and stopped the strong bleeding by the incandescent iron. Some fragments of bone were afterwards thrown off by exfoliation, and the granulation was healthy in every part, and in five weeks the young girl was perfectly cured, and without any external disfiguration. In consequence of the operation she became flourishing and healthy, and still continues so, though a year has elapsed since the operation.

Case VII. Mad. B., a lady 55 years of age, suffered for a year under a fungous softening of the greater part of the alveolar process of the upper jaw, especially affecting the anterior part of its margin. She had been treated by several physicians, by internal and external remedies, and the loose teeth had been extracted one after the other. After some time, the whole alveolar process was transformed into a thick steatomatous mass, which the upper lip could scarcely cover. After separating the latter from the tumour and turning it upwards, I removed with the saw the whole alveolar process, as far as it was affected, and touched it then with the incandescent iron. The patient seemed cured after some months, and she recovered gradually from her indisposition. But the cicatrix became again softened and covered with new fungous granulations. They were limited by astringent gargles, the pencilling with extr. saturni, and cauterisation with nitrate of silver; but the bone softened again, and the patient withdrew herself from my care.

Case VIII. A lady, 32 years of age, was affected for several years with a thickening of the left upper jaw, between the wing of the nose and zygomatic bone, produced by an encysted tumour of the bone.

I separated, at first, the cheek from the bone, beginning from the mouth, and removed the anterior part of the sac and of the osseous margin. The posterior surface, situated in the bone, was touched with the red hot iron. The cure followed without any other accident.

Case IX. A man, 30 years of age, suffered under an apparent intumescence of the hard palate, which existed for several years, and had increased gradually. The tumour was convex, and not unlike a divided egg. I circumcised it with the knife, and removed it. The bones of the palate, which were much pressed upwards, showed on their middle a small hole. I touched the cavity with the incandescent iron. It became filled with granulations; the palate regained its natural appearance, and the articulation, which before was very indistinct, was restored to its former distinctness.

Case X. The lower jaw of a man, 60 years of age, was at several places, and for a long period, enormously enlarged, in consequence of hydatid tumours between the external and internal laminæ of the lower jaw. At different times these were inflamed, and went into suppuration. I treated them as single abscesses by incisions, by which means the suppuration ceased, and the man became well again. The advanced age of this patient would not allow of a radical excision.

Case XI. A man, 33 years of age, who, for several years, had become an object of curiosity, in consequence of an enormous thickening of the left cheek, required my assistance. The cheek projected from the face, to the size of two fists. The upper part was hard, the lower elastic, and had been ten or twelve years in attaining this enormous development. I considered it to be an intumescence of the bones of the face, produced by an hydatid tumour. I therefore removed from the mouth the part of the tumour which projected into it, and extirpated through this opening a great part of the sac, together with the sharp edges of the bones. A strong suppuration was produced, and, with the beginning of the cicatrisation, the cheek, before withered and attenuated, was so much lightened and contracted, that the patient was cured without the least disfiguration.

Case XII. In a man of about 60 years of age, an osteosarcoma of the left zygomatic bone, attended with much pain, had been formed. At last the integuments were perforated, and the osseous fungus became plainly visible. Neither internal medicines nor strong cauterisation and burning had met with any success. I circumcised the diseased part with the knife, and removed, by means of the saw, the greater part of the zygomatic bone. I happened, by separating the neighbouring healthy integument of the face, to be able to cover a great part of the wound. In three months the patient was cured, with only a slight disfiguration. I did not see him again, and heard, accidentally, that he died of dropsy a year afterwards.

Case XIII. In a woman, 60 years of age, a long time after the gradual falling out of the molar teeth of the right side of the lower jaw, a tumour had been formed, reaching, by degrees, the size of a fist. It greatly impeded swallowing, respiration, and speaking, and threatened to destroy life in a short time, as it filled the greater part of the cavity of the mouth and throat. The tumour was free above, and below it was situated between the external and internal lamina of the lower jaw, which were separated by it from each other. It was not required to slit the mouth for the operation, on account of the great laxity of the soft parts. During the extirpation, the tumour was drawn forwards by a hooked forceps, and excised with the knife. I removed then, by the saw, the highly projecting edges of the lower jaw, which had been absorbed in the middle portion. The cure followed in a few weeks. A long time after, a fragment of the bone exfoliated.

The tumour was of a fibrous nature, and there was formed on its anterior and superior surface, a hydatid sac, which was filled with a clear albuminous matter.

Case XIV. In the month of August of the year 1832, I was called to see a long-bearded merchant of the Hebrew tribe. I found the second molar teeth of the upper jaw surrounded by an osteosarcomatous tumour. I removed the teeth, with part of the alveola, with a saw. Before complete cure, the man departed for his country; the wound cicatrised very soon afterwards. After the lapse of three months, a new fungus grew from the cavity. A clever surgeon extirpated it, and the wound cicatrised again.

In the year 1833, in the month of May, a new fungous growth was extirpated, and the wound was cauterised with the hot iron. It healed, but, in the autumn of that year, another relapse occurred, and a new extirpation and cauterisation were required. For a fortnight afterwards the red-hot iron was repeatedly applied to the fungus.

In spite of these repeated extirpations and applications of the actual cautery, the softening and loosening of the alveolar margin spread over the moiety of the right palatine bone, the nasal process of the upper jaw, and the body of the latter. In order to attack the diseased bone, it was necessary previously to divide the soft parts. I slit up the half of the face, from the right inferior margin of the orbit, descending on

the side of the nose, and drawing the knife through the upper lip; the lip and cheek were then raised, and drawn to one side, and the cartilaginous part of the nose to the other. The diseased bones were then removed by the saw to a considerable depth, and the steatomatous degenerated masses on that side were extirpated with scissars. Upon the margins of the bones I produced a strong effect with the incandescent iron, and concluded the operation by applying many twisted sutures, by means of which I united the divided integuments of the face and the upper lip. The pins were extracted in a few days, when the wound was closely united.

In a month the cure proceeded so quickly, that a great part of the wound was filled up by luxurious granulations, to which a solid circatrisation followed. The patient seemed to be cured in the third month, but the upper jaw, near the side of the nose, and part of the roof of the mouth, began again to soften and exhibit the reappearance of the tumour. I extirpated again the diseased parts, and burned the edges of the bones with the red-hot iron. The whole exfoliated, and the cure was complete. The defect of the bones was supplied by an instrument ingeniously contrived by Wallross, with a series of teeth, and a plate for the palate. By this means the patient was enabled to speak with a natural voice. With the exception of a cicatrised line, there was no external disfiguration of the face.

The patient departed to his country, and, after two years, he wrote to me, saying that he was quite well. However, six months later, he apprised me of his disease again having returned. He came immediately to Berlin, to subject himself to a new operation, with his wonted fortitude. I found both the old cicatrices of the bones, and the neighbouring bones, very voluminous and softened; this was also the case with the left side of the lower jaw; I therefore repeated the last-described operation. I made an incision from the orbit to the angle of the mouth, turned the flap, containing the lip and the cheek, to the one side, ordered the assistant to press the nose to the left side, and removed the diseased bones again by means of the saw. I then burned the wound with the red-hot iron. The wound of the face I united by twisted sutures, and this time, also, a good and quick union followed. In a few weeks all was cured in the mouth. No external disfiguration was to be observed. The patient departed home, and has continued to enjoy the best health up to the present moment.

Case XV. Mr. G., a strong young man, 22 years of age, was disfigured in such a manner as to prevent his going into society. The left side of the face projected in the size and shape of a large cocoa-nut, and by this tumour the right side was so much displaced, that the nose was thrown far to the left side. The right-eye protruded from its socket, on account of a tumour of the size of a hen's egg, on the point of which the eye was situated. The slit of the everted eyelids had the width, and presented the appearance, of the female labia, when drawn from each other. There was, at the same time, a complete entropium of both eyelids. The integuments of the cheek were much strained and attenuated by strong extension, and covered above with numerous varicose veins. The upper and lower tumours were separated from each other by a deep furrow. The young man, notwithstanding, enjoyed the best health; none of his senses were affected, he could even see with the protruded eye.

It may easily be imagined, that, in this case, many physicians had been consulted, many medicines used, without stopping the disease. The best surgeons in Germany and France had seen the patient, and had treated him not with homœopathic doses, as he had taken, besides other things, 200 bottles of the decoction of Zittmann,* and had been subjected twice to treatment by hunger and inunctions in all their severity; but as none of these methods had succeeded in checking the degeneration, he had discontinued for two years all further treatment. The degeneration, however, had continued its progress, and had gradually increased in size.

Convinced that internal treatment was of no use, that the tumour was of a fibrous nature, I resolved to perform the operation. I first made an incision, beginning from the external corner of the eye, and descending over the apex of the tumour to the margin of the lower jaw; I then separated the soft parts from the tumours under them, and turned the flaps to both sides. These flaps contained, together with the nose and cheek, the whole lower eyelid, and the deeply contracted fold of the skin, which separated both tumours from each other. I now began to work down below the boundaries of the tumour; I followed it below the extremely protruded zygomatic arch, from thence tracing it over the body of the right upper jaw, I arrived at the base of the cranium, where I found the principal root of the growth, which I separated from the surrounding parts. I separated other roots from out the nasal cavity, to which important ramifications extended. They had dilated the nasal cavity, and pressed down the roof of the mouth, which protruded in a convex shape. I then began the extirpation of the tumour of the orbit. Prolongations passing through the osseous plates of the orbital parietes, connected this tumour with the lower one. It was a difficult undertaking to preserve the eye; but I succeeded in freeing the bulb

* A decoction of sarsaparilla containing corrosive sublimate.—Ed. L.

from all surrounding parts, and in laying bare the optic nerve from the tumour. The tumour was still firmly attached to the orbital parietes; several osseous prolongations, or roots, proceeded from it, through the perforated bones; but I succeeded, at last, in becoming master of the whole tumour. The bulb of the eye, with its optic nerve, extending like a string at the bottom of the wound, was now as bare as an anatomical preparation between my fingers. My friend, Dr. Romberg, so highly esteemed for his researches on nervous diseases, and myself, now tried some experiments on the faculty of vision; we closed the other eye, and wherever we directed the eye, the patient discerned all objects very distinctly. As the bulb was too small for the orbit, there not being any adipose or cellular tissue, I made several coils of the optic nerve upon itself, and brought it into the posterior part of the orbital cavity. I then modelled from the lower eyelid, although enormously enlarged, attenuated, and covered with varicose veins, another one on a smaller scale, united it by fine knotted sutures, and, after concluding the operation, I adjusted and secured the large wound of the face by a considerable number of twisted sutures, using, according to the thickness of the edges of the soft parts, thicker or thinner Carlsbad insect pins.

The eyelids were closed to prevent the prolapse of the eyeball, and pressed into the ocular cavity with a large soft ball of lint, and by this means they were brought into a gentle connection with the eye.

The patient was subjected to a very strict antiphlogistic treatment; saline laxatives were recommended; he was bled; leeches were often applied in great number to the face, and day and night fomentations with ice-water were made. By this treatment life was at no time in danger; the wounds healed quickly. On the second, third, and fourth day, the sutures were removed, as the margins were united by the first intention. In a few weeks everywhere in the depth of the wound cicatrisation followed. The bulb and the eyelids projected naturally by new formed cellular tissue, and, at a later period, nothing extraordinary could be observed in the young man, except an oblique position of the eyeball with respect to the slit of the eyelids, and an obliquity of the cheek, and hanging down of the angles of the mouth, a necessary consequence of the division of the facial nerve.

Two years after the operation, Mr. G. paid me a visit. The paralysis of the cheek was strikingly ameliorated, and the corner of the mouth was much more moveable. The sight of that eye is complete, and even the eyeball is somewhat moveable, as it follows the motions of the eyelids.

From this case the idea first suggested itself to me, in all my following operations, where a complete division of the one side of the face might be required, and consequently of the facial nerve, to avoid this by not cutting through the cheek, but perpendicularly through the middle of the face, and even then, if the operation should be necessary, on the posterior part of the cheek. I therefore resolved, in the next case, to follow exactly the median line of the face, and, after dividing the nose and lips, to turn to one side the soft parts, like a half mask, and then to perform the operation.

This new method proved successful in the three following cases.

Case XVI. Madame H., 54 years of age, often sickly, observed for several years an impediment in the left nasal cavity, and, at last, she could no longer respire through it. It became completely obstructed, and a dark blue tumour was observed in the depth. External and internal remedies had been of no avail.

The patient now applied to me. I found a melanotic fungus filling the left nasal cavity, by which the external parts were much protruded, and upon them several melanotic tumours were observed.

The patient having taken, for some time, the decoction of Zittmann, I extracted all of the fungus that I could reach with the forceps, and removed then a great deal of the steatomatous degenerated mucous membrane of the nose. The turbinated bones of the nose were affected with caries. When the whole of the diseased parts were removed, the cavity was burned with a hot iron, which had the shape of the little finger. The patient underwent a slight antiphlogistic treatment, and she again took, for six weeks, the decoct. Zittmann.

Several moths after the operation, all seemed to do well, and the cavity to heal; but the fungus returned; it affected the inner surface of the nasal bone and the upper jaw, especially the nasal process of it; the soft parts swelled, and the protrusion of the fungus was only prevented in some places by the external integuments.

Three months and a half after the first operation, I performed the second. The soft parts were divided below the forehead, the knife drawn along the back of the nose, and, at last, the upper lip was divided. The parts were separated from their connections, the flaps, containing nose, cheek, and lip, were retracted, and the various parts of the ossa nasi, with a portion of the degenerated upper jaw, were removed with a saw. I then removed the carious and fungous portions of diseased bone which presented themselves in the bottom of the wound; some of the latter were prolonged even as far as the frontal sinuses. And, finally, after having cut off a melanotic part of the external integuments of the nose, I united the wound by means of a multitude

of twisted insect pins, beginning at the forehead and terminating at the upper lip.

The patient was treated on the antiphlogistic plan, and the preparation I delivered to my celebrated friend, Johannes Müller. This gentleman saw the patient on the third day almost cured, and on the fourth the whole wound of the face was united by a linear median cicatrix. Up to the present time, a year after the operation, no relapse has followed.

The following case, however, of the resection of the facial bones, on account of a fibrous tumour, is, undoubtedly, of much greater importance.

Case XVII. One day a lady, closely veiled, came to me, desiring to speak with me alone. She raised the veil, and I imagined I saw before me a pumpkin; I could discern nothing but a large round body, on the one side of which there was a disfigured, distorted face, with a nose pushed to one side; the left ala was enormously extended, and, together with the integuments of the cheek, covered the tumour. The eyelids were likewise greatly extended, and their orifices were oblique; the whole skin was covered with thickly studded varicose veins. The disease had reached this extent by degrees between the 18th and 48th year of her age. I began the operation in this case by dividing the face in the median line, commencing between the eyebrows, which were placed laterally, having been thrown from their natural situation to the position in which otherwise a cheek only is to be found. Having extended the incision to the nose and upper lip, I made over the root of the nose a transverse incision, parallel with the aperture of the eyelid. I then separated the soft parts, *i. e.* the moiety of the nose, the lower eyelid, the upper lip, and the cheek from the tumour, near to the ear, and directed this immense flap to be retracted.

The extent of the tumour, which projected on all sides, and which was uneven, and of an osseous structure, did not allow me to commence resection from within outwards, and I was forced previously to remove with an amputation-saw a projecting portion of the size of a fist. I was thus enabled to penetrate with a small saw on the side of the nose to the frontal cavity. I then sawed out the greater part of the inferior orbital margin, together with the inferior wall of the orbit. I then resected the zygomatic arch, and sawed in a transverse direction through the upper jaw, so that the alveolar process only remained. After dividing with a knife-saw the deeper situated hard connections, and separating the softer ones with scissars and knife, I was able to elevate the whole mass with strong levers, and I now beheld a large wide cavity. If the appearance of the tumour before the operation was not dissimilar to a pumpkin, it might be easily imagined now, after the operation, that the cavity had the appearance of an excavated one. On the left and right side, with the exception of the parts where the bones were sawed through, the parietes were felt smooth. The lateral wall of the cavity was formed by the inner surface of one-half of the nasal fossæ. The posterior limits of it were formed by the perpendicular posterior wall of the pharynx. At last I removed a great portion of the tumour from the frontal sinuses, which were enormously dilated. This was followed by the discharge of a quantity of fetid matter.

After restoring the fainting patient, I united the external incisions by a great number of twisted sutures. The eyelids and their corners were united by fine knotted sutures.

The patient at first received an analeptic medicine; the face was slightly covered; internally some wine was given, until the weakness had somewhat ceased, and on the following day a slight antiphlogistic treatment, corresponding with the constitution, was commenced by giving a solution of potassa. The thin deeply withered soft parts became slightly raised, and turgescent on the following day, and on the third day the union was so complete that all the sutures could be removed. In one place only, between the lower eyelid and the nose, did the united flaps open again to about the size of a shilling. But I hoped by a future operation to remedy the accident.

The case did not present any complication, or anything worthy of notice during its treatment. After a few weeks the patient was able to get up and move about. No paralysis of that side of the face occurred.

Besides several younger physicians, Drs. Jüngken, Berendt, Romberg and Holthof were present at this operation.

After complete restoration of the patient to health, two things were still to be done with regard to the face, which had become quite straight, viz., to close the opening above mentioned, and to raise up the eyelid, which was somewhat drawn down by the formation of the cicatrix. Through the great thinness of the skin and absence of the subcutaneous cellular tissue, I completely succeeded in the first object, only after some unsuccessful experiments, by refreshing the edges, and by applying sutures, having rendered the approximation of its edges more easy by means of lateral incisions. In the latter, however, I have no yet fully succeeded. The lady, for the last year enjoys the best health, enters into society, from which she had been excluded for more than thirty years. Hitherto there is no appearance of relapse; the cavity left by the enormous wound is much diminished. The face is natural and the muscles, on both sides, are capable of being put into action. The resected and extirpated tumour was of

a fibrous nature. The bones appeared partly absorbed, while in part they remained attached to the tumour, as attenuated though healthy plates.

Case XVIII. Mr. R., a judge, 50 years old, had observed, for many years, a gradually-increasing swelling of the bones of the left half of his face. There was no great pain, but always a dull sensation of pressure. The nose was pressed to the right, and the left wing was higher than the right, which latter covered part of the globular tumour. The skin of the cheek was bluish-red in colour, and was perforated by several fistulous openings. The left nasal bone, the orbital margin, and the zygomatic bone felt softened. In the cavity of the mouth, the alveolar process of the upper jaw, and the whole roof of the mouth were found to be transformed into a steatomatous mass.

The patient had been under the care of able physicians, and had used many of the remedies recommended against diseases of the bones, and lastly, the decoction of Zittmann. The disease, however, had developed itself in spite of treatment, and was about to perforate the whole integuments of the cheek. The patient now determined to come to Berlin.

I commenced the operation by dividing the face from above downwards, the incision passing through the nose and upper lip into the mouth. An upper transverse incision was made into the angle of the eyelids, and the inferior eyelid, the half of the nose, with the cheek, and the whole of the upper lip were separated from the softened bones underneath, until the masseter muscle was freely laid bare. I then commenced the resection, by sawing, at first, through the upper jaw in the direction from below upwards; passing with the saw through the nose, I turned the instrument transversely into the orbital cavity, and removed the greater part of the inferior orbital margin, and of the inferior surface of the orbit. I then sawed through the zygomatic bone, and penetrating into the deep-seated mass, changing sometimes the saw for the knife and scissars, I resected the deeper-situated parts of the upper jaw, the whole osseous part of the roof of the mouth to the velum, and the whole alveolar process. Several large cartilaginous portions of the bones, which were not yet fully softened, were gradually removed, and the parietes of this large cavity were burned with the red-hot iron. The bleeding soon ceased, and I was now able to unite the wound of the face. Twenty sutures were required for this purpose.

The patient was still able to stand after the operation. He was carried to bed, however, and received for refreshment a glass of wine and water. The treatment was slightly antiphlogistic, and as the vital powers appeared to be sinking on the next day, he took an infusion of valerian; however we were soon compelled to return to the use of carbonised waters, Selter water, and Saidschütz water, to open the bowels. On the fifth day the whole wound of the face was united, and all the sutures removed, except at the inner corner of the eye on account of the extreme thinness of the skin, where an opening remained; but the cure of this will soon be obtained. With a slightly nutrient and strengthening treatment the patient has made such progress, that to day, twenty-eight days after the operation, he walks about in his room: he was able to leave the bed already a fortnight ago.

In most of the cases of osteosarcoma here related, I had already tried an internal and external treatment, but it never was of any use; the disease proceeded in its development equally during the treatment, often continued for months. Mercury, iodine, gold, and the decoction of Zittmann, were especially the remedies by means of which I hoped to produce a favourable effect; externally I applied the pure extract of lead, and this latter appeared to stop for some time the progress of the degeneration.

In most patients the fungus began from an alveolar process, and extended either to the left or to the right, by affecting the neighbouring alveolæ one after the other. The disease seldom spread over both sides from the first affected alveolar process. Extraction of the teeth produced a much quicker development of the disease. I never extracted teeth but the patients came always to me complaining, that immediately after extraction of the teeth the fungus mass grew very quickly.

After the alveolar process had become degenerated in its greater extent, the zygomatic bone generally became affected before the palatine bones. The whole cheek formed an oval hemisphere; the nose was drawn to one side, and the nostril corresponding with the diseased cheek, formed a continuous level with it. Not only in *La Charité*, but also in my private practice, I have already seen a great number of such patients die, notwithstanding they were submitted to judicious treatment up to the moment of death. In some cases the fungous mass penetrated the skin, which previously became brownish red, and attenuated, and then the red fungous tissue was seen quite denuded. In others a collection of matter was formed in the cheek, which burst and gave issue to a decomposed and stinking fluid. In these cases the fungus sometimes shot out from the parietes of the cavity; the nasal cavity was obstructed with fungoid masses, and the patients respired only through the mouth.

Having had many of these unhappy examples before my eyes I was induced to per-

form the resection of the bones of the face to a greater extent, more particularly as smaller operations of this kind had always met with success. I generally found a relapse after resection of the bones, of a much rarer occurrence, than after the operation for carcinoma, or fungus in other parts of the body; at least, the disease, in respect to its curability, is much more favourable than carcinoma of the glands. Amongst the remedies calculated to prevent a relapse, I prefer the decoction of Zittmann to all others.

Some of the operations which I have described, are, on account of their great extent, and the success which attended them, not devoid of surgical interest; but their greatest value, in a scientific point of view, is to be found, perhaps, in the fact demonstrated, that by *dividing the face along the median line*, I have suggested a new method of operating, the effect of which is to prevent the paralysis of one moiety of the face, the infallible consequence of commencing our incisions in the posterior part of the cheek.

MR. WARD'S DEFENCE OF IRREGULAR PRACTITIONERS.

To the Editor of THE LANCET.

SIR:—I have been, for many years, an occasional subscriber to THE LANCET, which I regard as a valuable medium for communicating to each other, and to the medical profession generally, the individual sentiments of its respective members. There is no profession more honourable, more useful, or more important, than the medical; nor is there any other in which it is so necessary for the public to be in possession of an absolute guarantee, and certainty that all its members are men of real talent. It is because I think thus highly of the profession, and am anxious that every possible means of extending and improving its efficiency should be resorted to, for the benefit of the public, that I trouble you with a few remarks upon the *British Medical Association*, whose first anniversary is reported in the second number of your present volume as having been held in London on the 30th of Sept. last.

I do think it necessary that the public should have the best possible satisfaction that the man whom they entrust with the restoration or destruction of their health, is a man who thoroughly knows, and is perfectly aware of what he is about. For this very reason I deprecate the formation of this Association, and still more the application to Parliament to confine the study, science, and practice of medicine, surgery, &c., within its own contracted circle. I feel perfectly assured that this "liberal" proceeding of the most "liberal" section of a "liberal" profession will, if successful, entail a large amount of injustice on the public, and especially on the poorer classes of society, who now often receive much benefit (especially in the minor cases of disease) at a cheap rate, from persons whose practice will be completely put an end to by the contemplated measure. The consequence of this, in very many instances, will be that the poor, unable to pay the charges of a "regular" practitioner, which charges, now high, will no doubt be rendered higher by the increased "respectability" of the profession, after the putting down of "quackery," will be compelled to forego the benefit of medical assistance entirely, or submit themselves to be quacked and drugged by a parcel of ignorant and inexperienced young men who, at some public institution, may be allowed to acquire that practical knowledge which is necessary for their subsequent success, at the risk and sacrifice of those whom poverty compels to become the subjects of their crude experiments, in their first essays to reduce theory to practice; this alone is a sufficient reason why we should pause before adopting the suggestion of the "Medical Association," which would oblige every person, on every trifling occasion of injury or disease, either to forego the benefit of medicine, or to incur the serious expence of calling in a "regular" practitioner.

There are no circumstances under which the stale adage of "a stitch in time saves nine," is more palpably and immediately applicable than in the early stages of disease. The simplest remedies which can be furnished by the druggist, frequently at almost no cost at all, may be sufficient to stop a disease in its infancy, and prevent its progress, when a few days would give it such a predominancy in the system as might bid defiance to all the skill and ingenuity of the ablest practitioner. I have no doubt that the knowledge of this fact induces hundreds of poor persons to make timely application to these parties, when their circumstances might render the employment of a "regular" practitioner out of the question. I do, therefore, protest against the "respectability" of the profession being enhanced, by putting money into the pockets of "regular" practitioners, at the risk of annually sacrificing an immense number of human lives, and inflicting a large amount of human suffering through the want of that attention in the earlier stages of disease, which might have stopped its progress, but which poverty compelled them to decline until the last moment. If more evidence than this were necessary that the "liberal" members of the profession who thus seek an exclusive protection, are actuated (notwithstanding all their assumptions of generous care about the public) by the most sordid motives of

pecuniary interest (apart from any other consideration), that evidence is abundantly supplied in your present number of THE LANCET, by the letter there inserted, in which the practice of a clergyman, who generously gives his attendance on the poor at half the "regular" prices, is unsparingly reprobated. No charge of incapacity, or want of information, is brought against the reverend practitioner, but the bare fact of his serving the poor at a lower rate of prices is made the basis of repeated applications, first to the Apothecaries' Company and then to the bishop, to put him down, and when both these applications fail, the "regulars," in the plenitude of their "liberality," would be furnished with new powers from Parliament to enable them to pillage the pockets of the sick without fear of opposition.

And why should they have these new powers? What proof do the members of this self-constituted "Medical Association" adduce, that they are the people, and that medical wisdom shall die with them? Have they reduced the healing art to a regular scientific process, which can be demonstrated to their pupils, like the making of a coat by a tailor, or a table by a cabinet-maker? If so, what mean the conflicting theories, and antagonist practices, which pervade the whole profession? Is it not notorious that different members of the profession have completely opposite methods of treating the same diseases? And is not this diversity of opinion and practice a proof that the principles of the science, which the "regulars" would thus monopolise, are not yet generally known, or clearly defined? I appeal to every candid and intelligent member of the profession, whether a large proportion of the most important therapeutic agents have not been discovered by persons who have been denominated "quacks." With what face, then, can this self-constituted "Medical Association" ask the British Parliament to shut out the future possibility of such valuable additions to that medical information of which many of them stand sorely in need?

I speak of this as a matter of public principle and interest, and not from any personal considerations; inasmuch as my own practice cannot be molested by any or all the powers of monopoly that may be granted to this pseudo-"liberal" section of the profession styling itself the "Medical Association." My practice is, almost entirely, in one of the most distressing maladies of the human frame; of the causes and cure of which the "regular" practitioners of the "liberal" self-constituted "Medical Association" are confessedly notoriously ignorant. For many years my professional attentions have been chiefly occupied with cancer and tumour, during which it has often been my lot to be called in, in those desperate cases of carcinoma which have completely baffled the ingenuity and evinced the ignorance of the most noted "regulars." My system of treatment, at once simple and effective, forms a perfect contrast to that of the "regulars," inasmuch as I hold that, in no case is the knife necessary for the reduction of tumour or cancer, in any of their forms; while the "regulars" fall, continually, to cutting and maiming, as a cover for their ignorance of pathology, and of those therapeutic agents which would remove the malady more simply, with an infinitely less amount of suffering and anguish, and without any danger to the patient. The columns of THE LANCET afford me as many proofs as I can wish for of the many lives that are continually sacrificed, and the incalculable amount of agony which is needlessly inflicted on the unfortunate, through the unskilful manner in which these most painful of all maladies are treated in the London hospitals, by the very parties who are now asking Parliament to afford them the means of resting satisfied and contented in their ignorance, by paralysing every hand, and closing every mouth, that may attempt the dissipation of that mischievous ignorance, by operating, or prescribing for these maladies, in any other than the "regular" way. Thus, if the nefarious scheme of this "Association" succeed, will the health, limbs, and lives, of the public, be placed, without any check, at the mercy of every booby, who may be able to pay fees, and parrot recitations, while the really talented, *practical* man, whose profession has been taken up by his own choice, and whose knowledge is the result of observation, study, and experience, is to be precluded from affording the public the benefit of his ability, so "liberally" displaced to make room for the unwilling *protégés* of parents and guardians who were determined that their youths should be "*doctors*," whether nature had provided them with the necessary brains and industry or not.

This may serve "the interests of the profession," about which the orators of the "Association," and your correspondents, in THE LANCET, declaim so magniloquently; but will it serve the interests of the public? Let the public answer that question. There is at this moment an eminent M.R.C.S., in London, "quacking" upon my mode of treatment, who has actually published a book on cancer, though all he knows of it is from a recipe which he bought, from my late brother, two years ago. I have letters now in my possession, from this "regular" quack, to my brother, who was an irregular "quack," expressing an ardent wish that he (the M.R.C.S.) could become an apprentice to him, the "quack." One of these letters contains these words:—

"I shall consider myself more than repaid, if I can be enabled to do what I know both you and your brother can and have done

And yet these are the men whom the worshipful company of the self-styled "Medical Association" would, if they could, drive out of the field of practice, to die of starvation in a garret, that the moderate fees which are now paid to them might be doubled, and transferred to the pockets of the "regulars."

Now, Sir, to cut this matter short, I purpose to test the right of these "liberal" intolerants thus to arrogate the exclusive power of knowing the various ills, to which humanity is subject, and their mode of cure. It might reasonably be demanded of them, before such powers as are now claimed by them should be entrusted to them, to show that they possess a perfect knowledge of *all* the diseases incident to the human frame, and are in possession of all the readiest and most certain modes of cure. I will not, however, ask them to pass through an ordeal like this. I will simply require them to prove their superior capability in *one* instance; and, if they succeed in that *one* instance, I will acknowledge that they are, indeed, the medical Solons they would be considered, and cease to oppose the establishment of their monopoly.

Let this Association select from their hospitals as many as thirty persons, afflicted with the following forms of disease. Ten females, labouring under carcinoma of the breast, of which five may be occult, and five ulcerated cancer; five, afflicted with tumour of the head, face, or neck, such as the young man's, who, a short time ago, was operated on with the knife, in the *North London Hospital*, by a member of the Association, and who lived only four hours after the operation; and five, suffering from ulcerated cancer of the nose, such as new noses as usually made for from the skin of the forehead, or five cases of *noli me tangere*. These will make twenty. The other ten cases I will leave to the selection of the Association. They may either comprise a variety or not. If they can find a couple of *Hoo-Loos*, I have no objection. I will then claim the right of dividing the afflicted company into two lots of fifteen each, and will leave to the choice of the Association which lot they will take, upon whom to exercise all their powers of "exclusive" wisdom, while I try, with the help and blessing of God, to "quack" the other lot into health.

Now, Mr. Editor, I leave the world to judge whether the test of superiority which I here offer to the acceptance of this "Medical Association" be fair and equitable. If it be so, let them accept it; and propose an early day for carrying this trial of our respective systems into effect, and the result shall decide whether these gentlemen have yet arrived at that pitch of absolute perfection in medical science which can justify them in asking, or Parliament in granting, the uncontrolled and irresponsible powers which they demand.

If they shrink from its acceptance, I fancy the world will apply to them—all "liberal" as they are—epithets more truly descriptive of their character, than any which I shall choose to quote in this letter. I am yours, &c.,

JAMES LAWRENCE WARD.

18, Trafalgar-street, Leeds,
Jan. 26th, 1838.

ON BENEVOLENT FUNDS AND LIFE ASSURANCE IN HEALTH AND SICKNESS.

BY WILLIAM FARR.

(*The first part of a Paper read before the Council of the British Medical Association.*)

THE Association is greatly indebted to Dr. Webster, its able President, for bringing the subject of Life Assurance under notice.

The discussion of the subjects of mortality and sickness applied to the practical interests of society and of the profession, to which we belong, cannot fail to do good. It will impress the principles which regulate Life Offices on the minds of our members, induce them to profit by the advantages these institutions offer, and direct their attention to the collection of facts which are still wanting to render assurance available against some of the accidents of life.

The remarks I wish to make are of a general nature, and refer less to details than to principles. Mr. Fleming, and an actuary, practically acquainted with the business of life offices, will furnish the Association with any further details it may require.

The utility of the BENEVOLENT FUND, to which a third of the subscription is devoted, has been called in question; and the arguments against it, and in favour of mutual assurance, are so strong as to throw us back on first principles, to inquire on what basis this fund stands; whether its advantages are over-balanced, or can be obtained in a less objectionable mode. The Benevolent Fund is placed at the disposal of the Council to be bestowed on members of the profession, or their wives or children in distress; and this implies that the recipients have no direct right to the advantages they may claim or receive. On the plan of assurance each party is entitled on the principles of justice, to the sum he receives.

Before asking what evils benevolent funds and assurance avert, we must look at the present constitution of society. This will, at the same time, throw light on the Poor-law question. A certain supply of food, and physical conveniences are required, without which we are miserable and perish; these staple necessaries of life do not grow spontaneously in our climate; they can

only be procured by labour, and a certain number of persons are unequal to this labour; none are equal to it at all periods of life and in all circumstances. In the golden age, in the early Christian churches, and in that state of social organisation which some projectors think the best, everything was in common; the products of society, thrown into a common fund, supplied the wants of all; those disabled by nature, or sickness, or accident, lived on the common stock. There was no property; such an anomaly as one man rioting in luxuries, and another starving, was unknown. The innocence, happiness, justice, absence of envy, of the "state of nature," have been pictured by Plato, Sir T. More, Rousseau, Godwin, St. Simon, Mr. Owen, and other writers. While the real and imaginary wants of individuals are easily supplied, such a state of society is possible, but where incessant toil, hardship, and economy are required to supply the mass of the population with the necessaries of life, it is impossible; the idle count on being supplied with food,—the extravagant with luxuries; the close connection between active exertion and happiness is lost. This is obtained by giving every man an exclusive right to the products of his own labour and discoveries, which he only exchanges with others on obtaining something of equivalent value. Property is created; and money is the ordinary medium of its exchange. Gold and silver do not serve, as in Utopia, for certain unhonoured utensils. This state of society insures great and sustained activity, but it is open to several disadvantages, some of which are thus stated by Sir Thomas More:—"May I perish if I see anything that looks like justice or equity; for what justice is there in this, that a nobleman, a goldsmith, a banker, or any other man, that either does nothing at all, or at best is employed in nothings that are of no use to the public, should live in great luxury and splendour upon what is so ill-acquired; and a mean man, a carter, a smith, or a ploughman, that works harder even than the beasts themselves, and is employed in labours so necessary, that no commonwealth could hold out a year without them, can only earn so poor a livelihood, and must lead so miserable a life, that the condition of the beasts is much better than theirs! For, as the beasts do not work so constantly, so they feed almost as well, and with more pleasure, and have no anxiety about what is to come; whilst these men are depressed by a barren and fruitless employment, and tormented with the apprehension of want in their old age, since that which they get by their daily labour does but maintain them at present, and is consumed as fast as it comes in; there is no overplus left to lay up for old age." — *Sir Thomas More's Utopia — Bishop Burnet's Translation.*] To exaggerate, by artificial laws, these extreme cases that destroy the body and soul by superfluity on one hand, privation on the other, is wicked and unwise; but if all things were levelled and in common, I am afraid the state of mankind would be still more deplorable here, whatever it may have been in Utopia.

The system of having things in common, prevails among savage nations, and among the miserable and poor; each man of the clan shares in the good fortune of his fellows to a certain extent. There is little exchangable property; every one seizes, steals, and begs what he can. In society, as it exists at present, all children depend on the care of their parents up to a certain age, and repay this, in many instances, by supporting their surviving parents. The poor in this country were insured against the contingencies of sickness, infirmity, and age, by the Poor-laws; but are now to be forced into the state of self-dependence achieved by the middle classes.

Medical men, like people of other professions, sink, in addition to the sums spent in their early education, capital in acquiring a knowledge of the sciences, and professional skill, which can be rarely turned to account, so as to yield a fixed income, before the age of thirty; and, after that period, some time elapses before they realise a fixed income surpassing the expenditure their families and their position and success in society demand. Such is the general course of things. Arrived at this point, several cases may be supposed. A certain number realise an ample income. The majority succeed in establishing themselves so as to bear up under ordinary circumstances; to live from year to year, but to have no surplus. Some travel over the best part of life in this uncertain struggle; and sickness, accident, untimely death, plunge the individual, or those dependant upon his exertions, into destitution. This is often the man's own fault; he or his family have been vicious, improvident, extravagant, or unmindful. But this is not always true: looking around us at the numbers of competitors and at the inequalities that spring up in practice, we may fairly exclaim with the fisherman who had just escaped drowning: "Master, I marvel how the fishes live in the sea,"—and admit the accuracy of the allusion, "Why, as men do a-land; the great ones eat up the little ones." Such inequalities arise very naturally, and are inevitable; the public will always resort to the man they think best qualified to serve them. This does not, however, diminish the force of the fact that, where wealth accumulates in a few hands, poverty and narrow means will be the portion of others, allured from all circles into the ranks of our profession, by the attractions it offers to liberal minds.

It is to alleviate the pressure of accidents, and the bitterness of privation arising in

these circumstances, that the Benevolent Fund is set apart. I am afraid it is necessary. We have heard of cases of extreme distress, that no prudence could have averted; and here is room for the legitimate exercise of the benevolence which we see so deeply implanted in the human breast.

——Man is dear to man; the poorest poor
Long for some moments in a weary life,
When they can know and feel that they have been,
Themselves, the fathers and the dealers-out
Of some small blessings; have been kind to such
As needed kindness, for this single cause,
That we have all of us one human heart.

It can lead to no abuse if the Council state distinctly that the fund can only afford temporary or partial relief; and that, as it is of limited extent, although every family attached to the profession, has a title to its resources,—those who have displayed most industry and providence will have the preference. To ensure a judicious distribution of the Benevolent Fund, every case should be investigated by a committee; and to prevent the possibility or the suspicion of partiality, a short report of the circumstances should be published. The Provincial Association relieved two cases of great urgency, last year, but did not publish the facts, to avoid wounding the feelings of the parties in distress. This should be attended to; but it is no degradation to a family to be reduced by misfortune which defeats all calculation; publication would satisfy the contributors of the justice of the distribution; and the simple story of some of these striking griefs that shrink from the world, would call in more contributions to the Benevolent Fund than any argument.

LIFE ASSURANCE.

What are the contingencies assurance seeks to meet? In the first place the uncertainty of life. A medical man, who realised 10*l.* a-year more than he expended, and put it out at compound interest, would accumulate (interest at 4 per cent.) 1048*l.* at the end of 40 years; if the sum annually laid by was 100*l.*, the amount would be 10,482*l.* In this manner he could provide for the infirmities of old age, for his widow and for his children after him. But of 882 persons aged 30 only 327 survive 42 years; 8, 10, 15, 20, 22,—making in all 555,—drop off year by year; and at the beginning of the year no one can say, "I am not the man." Consequently, a man may be called away before he has laid by the first 100*l.* To meet this, 1000 healthy persons, all supposed equally liable to die, lay down 5*l.* each, on condition, that the widow and children of the deceased shall divide the amount. Five times a 1000*l.* would make 5000*l.*, and the interest of 5000*l.* would amount in one year to 200*l.*: if five of the healthy persons died, each share would amount to 1040*l.* But whether five or 1500 persons pay 5*l.* to an individual, or an office, engaging to pay 1040*l.* in case of death, the principle is the same. It is a lottery; 995 persons draw a blank, but that blank is life; five families feel less severely the shock of an irreparable loss. In this instance the five parties who claim the 5200*l.* do not ask for it as a boon, but demand it as a debt: they had the same chances—995 to 5—of losing, as the rest, for each party is supposed to have an equal chance of living or dying. In this manner the uncertainty of human life is met, compatibly with individual independence, and with the present constitution of society, in which each man exchanges the products of his own talents and industry for others of equivalent value. Life assurance, examined in any light, is one of the most important social discoveries of modern times.

HEALTH ASSURANCE.

That a Life Office may undertake to assure lives, the law of human mortality must be determined, and experience must establish that the same law applies to successive generations. This fact experience has already established; the mortality fluctuates little in ordinary circumstances, unless great epidemics or famines interfere. In order that the rate of mortality may be regular, the attacks of sickness must be equally frequent on an average; and the mortality of cases must be uniform, when submitted to ordinary treatment. Yet, not long ago, a lengthy discussion took place, in the French Academy of Medicine, on the question whether calculation was applicable to vital phenomena; whether the doctrine of probabilities may be legitimately employed in medicine. If the Academy had sent M. Double and his metaphysical friends to the *Bourse*, or to the annuity and insurance offices of this country, he would have learned that the relations of vital phenomena *are* determined by the doctrine of probabilities; and that, so far from being the dream of theorists, the monied people of England have invested many millions of money, valued and exchanged on the principle that the duration of vital phenomena admits of calculation. It is said, too, that general numerical laws do not apply to individual cases; but this is no more than saying that general descriptions and general principles have no practical value, as a principle stated in numbers does not differ from a principle stated in words, except in being more exact. The importance of the "numerical method," in practical medicine, was maintained by Louis, Chomel, Rayer, Velpeau, and only impugned by very shallow opponents; but we must be on our guard, and stand fast by observation, and the legitimate instruments of science, as absurdity sometimes meets with echoes in England.

Direct observation of the sickness in Friendly Societies, collected by the Highland Society, the Society for Promoting

Useful Knowledge, Mr. Edmonds, and Mr. Finlaison; the results obtained from the experience of labourers in the East India Company's service, and several collateral sources, prove that the same law regulates the quantity of sickness as regulates the mortality. Health may consequently be assured as well as life; on an average you have, one year with another, out of a given number, living in similar circumstances, the same number attacked, the same number constantly sick, the same number of deaths; consequently the sick require the same sums for their support, and the same amount of medical attendance. A man settled down in practice among a fixed population, will find little fluctuation in the amount of his bills. Health assurance provides against the accident of a man's own life,—an advantage not realised by life assurance.

Mr. Edmonds has calculated that a man, aged 36, may, by paying 3d. a-week, secure 100 pence a week in sickness, up to the age of 55;—by paying 3s. a-week he may therefore secure 5*l.* a-week in sickness. Further, by paying 13*s.* 5*d.* a-week at the age of 35 up to the age of 55, he may secure 5*l.* a-week after the age of 65.* A society that undertook these engagements would be quite safe.

We come now to the question what should medical men do in providing against the contingencies of life. First. Every man, having a wife, children, or aged parents dependant on his exertions, should unquestionably insure his life, so soon as he can set aside a sum, however insignificant, from his income. The premature deaths of Ritchie, Mackintosh, Wallace, Earle, one of our own Council, prove that procrastination may defeat the best intentions. Those who cannot provide for the present of course cannot assure against futurity; they must redouble their exertions, trust in Providence, and hope in the benevolence of our fund. Few in a profession like ours require to be assured against ordinary attacks of sickness; but in extreme cases of protracted disease, or chronic disability, this kind of assurance may prevent many from falling into misery or dependence. Assurance against cases of this kind may be effected at a low rate, as they are fortunately not of frequent occurrence.

(To be Continued.)

SALIVATION.—M. Brachet, of the *Hôtel Dieu*, at Lyons, strongly recommends the acetate of lead as a remedy in cases of violent salivation. He administers from two to three grains twice a day, in conjunction with small doses of opium, and says that he has employed this remedy with success in more than fifty cases.

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* Life Tables, p. 19, 20.

IRISH DRUGGISTS ILLEGALLY PRACTISING AS APOTHECARIES.

To the Editor of THE LANCET.

SIR:—As your columns are always open for the rectification of every species of abuse, I trust you will permit me, through the medium of your valuable periodical, to direct the attention of the Governor and Company of Apothecaries' Hall in Ireland to the vast number of druggists, and other unqualified persons, who are in the daily habit, not only of compounding the prescriptions of physicians and surgeons, but also of giving their advice, *as medical men*, to those who are foolish enough to offer to receive it from them. This is a system which, unless it be checked at once, while it is in its infancy, by those who have the power to do so, and who are constituted the guardians of the profession of apothecaries, will become sanctioned, through custom, by the non-medical public, and will then be beyond control.

It is a most shameful thing that a man should have to undergo a tedious apprenticeship, and an expensive course of education, and afterwards not be protected in the exercise of his profession by the only persons who have the power, though, it would appear, not the will, to do so. It may with reason be asked, What is the use of taking out the diploma of Apothecaries' Hall at all, if any one who chooses to set up a druggist's shop is at perfect liberty to compound prescriptions, and to act, in every other respect as an apothecary? The blunders made by those persons are beyond number. I know an instance myself in which a druggist wounded the brachial artery in attempting to bleed a man. This "practitioner" is in the daily habit of compounding recipes, and yet, I am informed, he has *no weights smaller than half a drachm*. These practices should be stopped. The interests of the Directors of the Hall themselves require it as much as do those of the profession at large.

In conclusion, I beg to inform you that the great portion of the profession in this country seems anxious that you should occasionally direct your attention to the manifold abuses existing in each of our medical corporations. We stand very much in need of a fearless and talented enemy of corporate corruption, such as you have proved yourself to be, and be assured you would here quickly find plenty of employment for your pen. Trusting you will give insertion to this letter I remain, Sir, your obedient servant,

WILLIAM WHITE.

29, Eden Quay, Dublin,
Dec. 30, 1837.

ON THE

DURATION OF LIFE IN THE ENGLISH PEERAGE.

By T. R. EDMONDS, *Esq.*, *B.A.*, *T.C.C.*

THE probable duration of life, in different classes of the population, is a subject on which *very little* statistical information has hitherto been obtained. In the absence of facts, various conflicting opinions have been entertained respecting the relative duration of life among the poor and the rich,—among those who are, and those who are not, dependent on manual labour for subsistence. It is only with respect to the relative duration of life among agriculturists and manufacturers, that we have hitherto possessed any positive information. Agriculturists live much longer, according to all observation, than manufacturers, or, speaking more correctly, the inhabitants of rural districts live much longer than the inhabitants of large towns.

The only valuable statistical observations which have been instituted relative to the duration of life among persons having no occupation, are those of M. Deparcieux, on French monks and nuns, made in the last century. The observations, by the same author, on the mortality of French annuitants, agree sufficiently well with the more recent observations alleged to have been made on English annuitants. Neither of these observations on annuitants is, however, of any considerable value, because the lives observed did not represent average lives, at the same ages, of the class of population from which they were selected. The observed mortality of French monks at the higher ages of life is considerably greater than that of French annuitants at the same ages. But the difference is not greater than what might be expected to result, from the known disposition to select for annuitants the most healthy and vigorous lives, and to reject any lives of doubtful health.

In the English Government Annuity Office, there probably exists an abundance of materials, if properly classified, for determining the average mortality of persons in easy circumstances. The leading principle of such classification ought to be, the separation of the mortality of newly-admitted members from that of anciently-admitted members. The mortality of all members or annuitants of more than twenty years' standing, would probably afford a good measure of the mortality in England among the part of the population in easy circumstances.

The materials which are rapidly accumulating in the Life Assurance offices of London, might serve to form a valuable estimate of the duration of life among people in easy circumstaces. The chief of these offices, the Equitable, has published the whole of its experience, in ample detail, and in a useful form. The mortality has been distinguished according to duration of membership, as well as according to age. By means of the former distinction, which had never before been introduced into any observation, we are enabled to prove that, in the Equitable, the mortality, at any given age, increases as the time of admission becomes more remote.* The differences in the mortalities at the same ages frequently amount to 50 per cent., even where none of the persons observed had been members during more than 35 years. A similar difference, dependent on the duration of membership, may be presumed to exist in the case of annuitants as in the case of insurers. The apparent discrepancy between the observations on French monks and the observations on French annuitants, would then be reconciled.

In the absence of any direct information respecting the mortality of the middle classes in England, it was considered highly desirable that the public records of the English Peerage should be examined. If the law of mortality prevailing among peers could be deduced from these records, it was expected that the result would be as valuable as the information yielded by annuity and insurance offices, even when the means of making an approximate estimate of the effect of selection were afforded. After the necessary investigation, it was found that the public records of the dates of birth, accession, and death, supplied materials sufficiently extensive for determining the law of mortality to which peers are subject. The law of mortality of the peerage, thus directly obtained from facts, appears to be applicable to persons in general living in easy circumstances. At least, the law deduced is reconcileable with the apparent law exhibited in annuity and insurance societies, when allowance is made for the known effect of selection in the diminution of the mortality.

The present investigation of the mortality of English peers, is founded upon dates obtained from "Collins' Peerage," edition of Sir Egerton Brydges. A few subsequent dates were obtained from "Lodge's Peerage for 1832," in which year I made the calculations of which the results are now exhibited. The observation was made on 707 peers, from the time of the accession to the time of the death of each peer. These peers constituted the lines of succession to 109 titles, excluding the first peer and the existing peer of each title. There were also excluded 32 peers whose deaths were violent or accidental, leaving 675 peers as the basis of the present observation. The 109 titles observed include nearly all peerages existing in 1831, which had endured long enough to be enjoyed by more than two peers in succession.

* See LANCET, October 28th, 1837.

(1.)—*TABLE showing for each of Nine Combinations of 675 Peers, the average Age at accession, and the average period of rule. Also showing the Expectation, or Mean Duration of Life, of the Peers whose accessions took place at the mean ages 14½, 24½, 34½, and 49 years respectively.*

	1	2	3	c	1 & 2	3 & c	Ages specified	Ages not specified	Total.	City Mortality.
Number of lines of succession	19	29	61	48	48	109	.....	.....	109	
Number of Peers observed	229	232	214	192	461	406	432	243	675	
Aggregate of ages at accession	6860	7337	6693	5856	13697	12549	12542	7848	20390	
Aggregate of years of rule..	6193	5865	5873	5310	12058	11183	12413	5518	17931	
Average age at accession ..	27.77	31.62	31.28	30.56	29.71	30.91	29.03	32.30	30.21	
Average period of rule	27.04	25.28	27.44	27.66	26.16	27.54	28.73	22.71	26.56	
Age at Accession. Interval. Mean Age.	**EXPECTATION, OR MEAN DURATION OF LIFE.**									
10——19 ..... 14½.....	36.14	38.24	40.84	39.67	37.21	40.24	41.59	31.77	38.29	36.83
20——29 ..... 24½.....	22.69	26.56	31.89	28.19	24.34	30.31	30.24	21.55	27.03	32.35
30——39 ..... 34½.....	23.66	25.33	26.49	25.06	24.50	23.56	25.59	21 07	23.87	26.28
10——39 ..... 24½.....	27.03	30.26	31.57	30.88	28.63	31.26	32.36	24.76	29.60	32.35
40——59 ..... 49	18.47	13.49	16.56	17.80	15.73	17.18	15.71	16.41	15.99	17.81

The date of death of each peer, and consequently the date of accession of his successor, is invariably recorded. The period of rule, or occupation of the title, by each individual peer, is thence known. The resulting average period of rule, for the 675 peers, is *twenty-six and a half years*, which is an established fact of considerable interest. A result almost identical is obtained from the succession of sovereigns of England, from William the Conqueror to the end of Geo. IV., when the reigns of nine sovereigns deposed or put to death, are excluded. Twenty-six and one-third years is the average duration of the reigns of the 24 sovereigns who died in the ordinary course of nature, whilst sovereigns. But the average duration of the reigns of all the 33 sovereigns was only twenty-three years.

The periods of rule, being the times elapsed between the accession and the death of peers, suffice for determining the average duration of life at different ages, when the ages at accession are known. The mean age at accession of the 675 peers was 30¼ years, and the average period of rule was 26½ years. According to the Carlisle table the expectation, or mean duration of life from the age of 30¼ years, is 34 years, or 7½ years greater than in the peerage. According to a table, in which the mortality at every age is 50 per cent. greater than in the Carlisle table, the expectation at 30¼ years is 28¼ years, which is two years greater than in the peerage. This last table, which I have designated, "City Mortality," agrees nearly with Deparcieux's table, for the monks of Sainte Geneviève. The mortality of peers will be found to correspond with this "City" table more nearly than with any other published table.

One of the most remarkable facts arrived at by the present investigation is, the low relative duration of life of those peers whose accession took place between the ages of 20 and 30 years. The mean duration of life of peers who acceded between the ages of 20 and 30 years, is four years less than it would have been if the ordinary relation had been observed, with the mean duration of life of peers whose accession took place between the ages of 10 and 20 years. A difference of the same nature, but of half the amount, is observable in peers who acceded to the title between the ages of 30 and 40 years. If abstraction be made of the peers who acceded to their respective titles between the ages of 20 and 40 years, the resulting law of mortality would have agreed more nearly with that of the City table. It seems probable that, with such a modification, the peerage mortality will be a good representation of the mortality in general of the class of persons in easy circumstances.

In commencing the present investigation, it was intended to deduce the law of mortality of the peerage from those peers alone

whose ages at accession, and consequently at death, were recorded. Out of the 675 peers, the ages of 432 were thus recorded, and the ages of 243 were omitted. The defect in the intended mode of proceeding became manifest, when I found that the average period of rule of those whose ages were returned was 28¾ years; whilst the average rule of those whose ages were not returned was only 22¾,—numbers differing from each other by six years. It was hence concluded, either that the mean age at accession in the two classes was very different, or that the earlier death of a peer exercised an influence in preventing the discovery and publication of the date of his birth. It became necessary, then, to institute an inquiry by which an approximation might be made to the dates of birth of those peers whose ages had not been recorded. The result of the inquiry was, that the difference of six years in the average period of rule was attributable to both of the above-mentioned causes. The mean age at accession of those whose ages were not specified was found to be 3¼ years greater than that of those whose ages had been specified; and the mortality of the former class was found to be considerably greater than that of the latter class.

The approximation to the dates of birth of peers whose ages were not recorded, was made by observing the recorded dates of birth of other peers in the same line of descent. For example, when the dates of birth of the father and son of a peer were given, the date sought was assumed to be half way between the two known dates. Although in single cases the resulting age is not to be relied upon as correct, yet when the cases are sufficiently numerous the approximate ages thus deduced are nearly as valuable as the recorded ages would have been. The ages of some will be estimated above the truth, and the ages of as many others will be estimated below the truth, so that the errors will compensate each other, and the deduced mortality will not differ from the true mortality. In making this inquiry as to the probable age of peers, it was found convenient to trace the relationship of the peers of the same family by the help of diagrams representing the place occupied by each peer, with respect to the number of generations reckoned from the first peer of the family, and also with respect to the number of collateral removals in consequence of the extinction of elder branches. The average period intervening between the birth of father and son, in the line of ancestors of any peer, was found to be 31¼ years. The common mode of reckoning a generation to mark the lapse of one-third of a century, may therefore be relied upon as very nearly correct.

(2.)—*TABLE showing the Numbers who entered or acceded to the Title, and the Numbers who Died in each decennial interval of Age, distinguishing those whose Ages were specified; showing the Proportion constantly Living at each decennial interval, out of a Total of* 1000 *Living at all Ages; also, showing the Annual Deaths out of* 100 *Living at each decennial interval of Age.*

Decennial Interval of Age.	Entering.			Dying.			Proportion constantly Living.	Mortality per Cent. per Annum.			City Mortality.
	Ages specified.	Ages approximate.	Total.	Ages specified.	Ages approximate.	Total.		Ages specified.	Ages approximate.	Total.	
0— 9	48	14	62	5	.....	5	15	.54	.....	1.84	—
10—19	85	43	128	6	2	8	63	.76	50	.71	.87
20—29	99	58	157	20	9	29	135	1.21	1.18	1.20	1.16
30—39	91	56	147	36	31	67	104	1.53	2.73	1.92	1.55
40—49	58	32	90	63	43	106	217	2.37	3.47	2.72	2.68
50—59	33	22	55	87	55	142	185	3.86	5.14	4.27	2.95
60—69	10	17	27	89	53	142	125	5.67	7.98	6.36	5.82
70—79	7	1	8	86	44	130	53	11.50	22.28	13.76	11.64
80—89	1	.....	1	35	5	40	12	19.80	14.08	18.91	21.85
90—99	.....	.....	.....	5	1	6	1	33.30	.....	37.50	38.21
0—99	432	243	675	432	243	675	1000	3.48	4.40	3.76	—

Three different methods have been adopted in the present investigation of the mortality of the English Peerage, and the three series of results agree with each other. By the first method, the average duration of life at any age has been found, by dividing the sum of the years of life enjoyed after that age, by the number of peers between whom those years of life were shared. In table 1 may be seen the results thus deduced. By the second, which is the most usual method, the mortality at decennial intervals of ages has been obtained, by dividing the annual deaths in each interval by the contemporary numbers living at the same interval. The numbers entering, and the numbers dying, at every year of age being given, it was easy to calculate the total number surviving at any yearly interval, and, consequently, the number of survivors embraced in a decennial interval of age. The quotients of the annual deaths in decennial intervals of age, by the living in those intervals, are exhibited in table 2, as well for those peers whose ages have been specified, as for those peers whose ages have been approximately obtained.

The eighth column of table 2 contains information of a new species, which is of some political importance. It represents the manner in which the total numberof peers existing at any time, are distributed according to age. On inspection of this column it may be perceived that the mean age of peers is about 45 years. There are more peers between the ages of 40 and 50 years, than at any other decennial interval; and it is a singular fact, that the numbers existing at the succeeding decennial intervals, are nearly equal, each for each, to those existing in the intervals preceding 40 to 50, but in a reverse order. Supposing the mortality of the class of persons in easy circumstances to be the same as that of the peerage, and supposing the governing power of a nation to reside in the heads of families possessing wealth and station by inheritance, it will follow that the mean age of such constituencies is 45 years. It is commonly, and probably correctly supposed, that the disposition to resist political changes, is strongest in the oldest men, and that the disposition to effect politicalchanges is strongest in the youngest men. If the changes in political sentiments be uniformly progressive according to age, from the oldest to the youngest men, than the point of equilibrium will be at the age of 45; or, the governing power of a country will reside in the representatives of the opinions of the part of the population aged 45 years.

(3.)—*TABLE showing, for various Classifications of* 675 *Peers, and for* 12 *different intervals of age, the Numbers who Died in these intervals out of* 100 *alive at the commencement of these intervals.*

Interval of Age.	1	2	3	c	1 & 2	3 & c	Total, 1, 2, & 3.	Total exclusive of Accession from 20 to 29.	Accession from 20 to 29.	Total whose Ages are specified.	City Mortality.
14½—24½	6.8	13.1	4.1	8.9	9.6	6.7	8.2	8.2	.....	9.7	9.5
24½—34½	18.1	10.4	12.6	8.6	14.8	10.7	14.1	13.0	15.3	10.6	12.5
34½—44½	18.9	19.1	15.9	14.8	19.0	15.4	18.0	16.0	22.6	13.5	16.4
44½—54½	35.6	26.9	28.3	31.6	31.2	29.9	30.2	29.1	34.0	30.0	21.5
54½—64½	40.7	44.2	33.3	42.1	42.6	37.4	39.5	38.1	45.6	35.8	33.7
64½—74½	57.5	61.9	64.0	52.2	59.9	58.9	61.4	59.8	70.3	54.8	57.3
14½—34½	23.6	22.2	16.2	16.8	23.0	16.7	21.1	20.1	.....	19.2	20.8
34½—54½	47.8	40.9	39.7	41.7	44.3	40.7	42.8	40.4	48.9	39.5	34.4
54½—74½	74.8	78.7	76.0	72.3	77.0	74.3	76.6	75.1	83.8	71.0	71.7
14½—44½	38.1	37.1	29.5	29.0	37.7	29.5	35.4	32.9	.....	30.2	33.8
44½—74½	83.8	84.5	82.8	81.0	84.1	81.9	83.7	82.4	89.3	79.7	77.8
14½—74½	90.0	90.2	87.9	86.5	90.1	87.3	89.5	88.2	.....	85.8	85.3

In table 3 are exhibited the results obtained by the third method of investigation. This method consists in observing the numbers surviving at any year of age, and in observing the numbers dying out of these, in the succeeding ten years. The quotients of the latter by the former numbers, are the proportions exhibited in the table. On account, however, of the small number of facts, and in order to obtain a uniformity in

the results, the statements have been obtained from the mean ages, for aggregates of ten years. For example, the mortality (30.2 per cent.) stated to have existed, on the total, during the ten years following the age of 44½ years, is really the mortality which occurred during 10 years, on all who lived to attain any age between 39½ and 49½ years. From the results in this table it would appear, that the mortality under the age of 65 years, in the peerage, increases at the high rate of 50 per cent. for every increase of ten years in age. It is only in London, and other large towns, that so high a rate of increase has been observed; the rate of increase in the mortality of the general population at the same ages, rarely differs from 34 per cent. for every additional ten years of age. At all ages above 60 years, the mortality now exhibited for the peerage, agrees very closely with the results of the latest observations (1811-30), on the male population of Sweden.

With the view of ascertaining whether the mortality in the ancient peerages differed from that in the less ancient, and also with the view of ascertaining (by a similarity in the results) the sufficiency in number of the facts observed, the 675 peers were divided into three classes, according to the antiquity of the titles. A fourth class (c), was derived from the first two classes, by taking only the four last peers in the line of succession to each title. The object in forming this supplementary class was, to ascertain by comparison with class 3, whether peers, whose titles were most ancient, suffered a mortality different from that of contemporary peers of modern titles. The result of the inquiry is, that no sensible difference exists. On comparing classes 1 and 2 with classes 3 and (c), it will appear that at ages under 40 the mortality of the total occupants of the ancient titles was considerably greater than that of the occupants of modern titles, and than the mortality of the latest occupants of the ancient titles. Whence it follows, that peers of the last century enjoyed a duration of life in some degree greater than that enjoyed by peers in the previous centuries. Possibly, the civil wars of the Commonwealth, by inducing fatigue and diseases in the peers engaged, may have been the cause of the higher mortality of the 17th century. In addition to the four classes just mentioned, separate observations have been instituted on those whose ages have been specified, and on those whose ages were approximately obtained. In the three tables subjoined are presented the results of the observations made on these several combinations. The degree of mutual support lent to each other by the different results, may be estimated after a careful inspection of these three tables. It appears to me that the general agreement between the results of the various sectional observations is such as to warrant the belief that the facts are sufficiently numerous, and that if a greater number of facts had been attainable, no material addition would have been made to the information now deducible.

46, Regent-square, Jan. 13th, 1838.

LIGATURE
OF THE
PRIMARY ILIAC ARTERY,
NEAR THE BIFURCATION OF THE AORTA.

Performed with success by Professor SALOMON, *of St. Petersburg.*

LIGATURE of the primary iliac for aneurysm of the external iliac artery, has, as far as we know, been performed three times. The first operation was successful in the hands of Valentine Mott, of New York; the second was performed by Mr. Crampton, of Dublin, but the patient died of hæmorrhage on the eighth day. In the third case, Mr. Guthrie tied the common iliac, for supposed aneurysm, which, after the patient's death, turned out to have been fungus hæmatodes. We are happy in being able to communicate a second successful example of this formidable operation, which was recently performed at St. Petersburg, by M. Salomon.

Luc Padurbusr, 38 years of age, of good constitution, had received, six months before his entrance into the hospital, a kick from a horse in the left groin; shortly after the injury a tumour appeared in the inguinal region, and increased so rapidly as to impede progression, within a short period of its appearance. The patient was transferred to a clinical ward on the 24th of May, 1837, and on examination the following particulars were noted:—Voluminous tumour, occupying the left inguinal region, not well defined; it extends four finger-breadths below Poupart's ligament, and as many above it; externally it reaches the anterior superior spine of the ileum, and internally it touches the linea alba and pubis. The pulsations of the tumour are very perceptible to the eye and touch; they are strongest at about two inches above the ligament; here the skin is very much distended and thin; the stethoscope detects a bellows-sound. The tumour can be traced into the abdominal cavity, along the line of the external iliac artery, as far as its origin; on compressing the abdominal aorta the tumour becomes smaller, and its pulsations cease. The patient keeps the thigh flexed; the least attempt at extension causes severe pain, which shoots along the external side of the thigh to the ham and leg. Pulse quick and

full. The nature of the disease, and the necessity of an operation being manifest, the latter was performed on the 26th of May, in the following manner:—

An incision, four and a half inches long, was made, on the left side of the abdomen, extending from the anterior superior spine of the ileum, to within an inch of the last false rib. The incision was commenced at an inch on the inner side of the spinous process, and ran in a parallel direction with the inferior (*internal*) epigastric artery. The superficial fascia and the fleshy fibres of the abdominal muscles were next divided in the same direction, and Cooper's fascia brought into view. A small opening having been made into this fascia, it was divided for some extent, at lower part of the wound. The peritoneum now lay bare, and was carefully separated, with the finger, from the fascia covering the iliacus muscle, and then from the psoas muscle. An assistant now fixed the peritoneum and intestines, by pressing them with the index-finger against the upper part of the wound, and this done, the operator continued to separate the peritoneum, until he arrived at the common iliac artery: the pulsations of the vessel, which appeared to be healthy, were distinctly felt under the finger. Having ascertained, with precision, the exact direction of the artery by means of the touch (for it was impossible to *see* it in the bottom of the wound), the operator now separated the iliac vein from the artery with the left index-finger, and then succeeded in passing an aneurysmal needle along the same finger, under the artery. The vessel was completely isolated, from surrounding parts, with the aid of the needle, and then, by means of Deschamps' elastic needle, a ligature was passed round it, from the inner to the outer side. The ends of the ligature were tightened with the common double knot, and brought out at the nearest part of the wound. This step of the operation was not attended with any difficulty. On tying the knot pulsation ceased in the tumour, and it rapidly diminished in volume. The edges of the wound were brought together by strips of adhesive plaster; some pledgets of lint were placed along it, and the whole supported by a common bandage. The patient lost very little blood during the operation, as none of the vessels divided required a ligature.

On the evening of the 26th the pulse was quick and full, but the patient expressed himself much relieved. Fourteen ounces of blood were taken from the arm, and fifteen drops of laurel-water administered every three hours. Lemonade for drink; draught containing cream of tartar at night.

27. Pulse quick; no stool. An evacuation was produced by the administration of some castor oil. The lower extremity, which was at first cold, is now warm. The patient now complains of pain in the inner side of the knee, which is swollen, hot, and red; ten leeches to the affected part; warm fomentations.

29. The inflammation of the knee has diminished; the skin here is much cooler than on the 27th; a superficial gangrenous eschar has formed over the fifth metatarsal bone. Some lint, moistened with spirits of turpentine and camphorated spirit of wine, was immediately applied to this point. The general condition of the patient is favourable; he has slept several hours; pulse less quick.

30. The patient has slept tranquilly during the night, and feels himself strong; pulse soft, 80; skin cool; tongue clean; stools natural; the left lower extremity is warm; the aneurysmal tumour has considerably diminished in size. On removing the dressings the wound presents a favourable aspect; the greater portion of it is united by the first intention; a small portion near the ligature furnishes pus, which is of good condition. As the swelling at the knee had again become painful, twelve leeches were applied.

31. Has passed a quiet night; the knee less painful; the eschar on the foot is limited, but a similar eschar has formed over the skin covering the patella, which is inflamed. Suppuration of the wound continues slight.

June 2. Tumefaction of the knee is more painful; twelve leeches applied, which removed it altogether. Another small superficial eschar occupies the external part of the sole of the foot. The general condition of the patient, and that of the wound, are most satisfactory.

From this period the patient continued to improve, and near the end of June the tumour had subsided to one quarter of its original volume, being converted into a hard solid mass. The temperature and sensibility of the limb were normal, except at the toes and sole of the foot, which still remained numbed. The whole of the gangrenous spots are healed. On the thirty-second day after the operation the ligature came away, and the wound then quickly healed in its whole extent. At the expiration of two months the patient was completely cured.

The principal difficulty which the operator has to overcome in taking up the primary iliac, depends on the depth at which the vessel is situate in the cavity of the abdomen. M. Salomon considers the incision, which he made parallel to the epigastric artery, as the most eligible one, inasmuch as it permits the surgeon to get at the vessel easily, without separating too much of the peritoneum. Valentine Mott made a semilunar incision, similar to the one which Sir

A. Cooper recommends for ligature of the external iliac. Other surgeons advise us to make the incision along the spine of the ileum, but this method renders it very difficult to pass a needle round the artery, and compels the operator to separate the peritoneum to a great extent.—*French Gazette*, No. 52, 1837.

QUESTION RELATIVE TO MEDICAL JURISPRUDENCE.

The relative altitudes of the insertion of the umbilical chord, at different periods of intra-uterine existence, furnish data of some importance towards determining the probable age of the fœtus. Chaussier has examined this question with considerable care, and from his researches it has been generally considered as proven.

First. That at the age of nine months the insertion of the umbilical chord occupies exactly the middle point between the summit of the head and the soles of the feet.

Secondly. That, anteriorly to this period, the insertion of the chord approaches the chest, in proportion as the fœtus is younger.

Thirdly. Finally, that in the adult the umbilicus is closer to the soles of the feet than it is to the head.

These changes relative to the point of insertion of the umbilical chord are explained, on the supposition that during intra-uterine life, development proceeds more rapidly in the upper part of the body than in the lower; while, on the contrary, after birth, development predominates in the lower extremities. Thus, in the full-grown subject, the middle of the body does not correspond with the umbilicus, but with a point situate closer to the pubis.

M. Moreau, Professor of Midwifery at the *Faculty of Medicine*, Paris, has lately directed his attention to the subject; he has carefully measured the bodies of five hundred children born at the *Maternité*, and found that of this number only four presented examples of the insertion of the umbilical chord exactly in the middle of the body; in the rest the point of insertion fell, on an average, from eight to nine lines below the middle,—in a few children, born about the sixth and eighth months, the chord was inserted into the middle point.

M. Moreau concludes, that henceforward, instead of considering the insertion of the umbilical chord at nine months, as falling exactly on the middle point of the body, we should say that it falls from eight to nine lines below the middle point.

French Lancet, No. 140, 1837.

CURE OF ANKYLOSIS OF THE KNEEJOINT.

Dr. Little, of Fenchurch-street, has addressed to us a letter, in which he says, with reference to his recent communication on the cure of ankylosis of the kneejoint, that our anxiety to repel a charge of injustice to English surgeons, led us to comment in the editorial notice attached to his communication, on an accusation which had, "in truth, never been made or implied by him (Dr. L.), inasmuch as," says Dr. Little, "the import of my words was, that I wished that M. Duval should not receive unjustly from English surgeons (your readers) the merit due to Stromeyer.

"In the second paragraph of my letter (Dr. Little continues), I certainly asserted no 'claim whatever to the extension of the principle in question' (the Stromeyerian method of curing club-feet and contractions of the ankle), although your readers might infer the contrary, from the critical remarks, as I distinctly informed them, to repeat my own words, that 'Dr. Stromeyer has already, for several years past, been accustomed to divide the tendons of the semi-membranosus, semi-tendinosus, and biceps femoris muscles,' for the cure of so-called ankylosis of the knee, and that 'I have *imitated* his practice."

*** We regret to find that we had totally misunderstood the purport of the passage to which Dr. Little alludes, and which ran thus:—"I cannot allow any one to receive, unjustly, from English surgeons, the merit of priority in introducing this extension to the kneejoint of the Stromeyerian method of curing contractions of the ankle." The meaning which these words conveyed to us certainly was, "that to English surgeons was due the merit of having first introduced the operation, which consists in dividing the the semi-membranosus, &c. tendons." Dr. Little intended to express quite a different idea; and we again repeat our regret that a misconception of the passage which we have cited led to the insinuation of a circumstance for which no foundation existed.—Ed. L.

Nervous System.—Rhomberg considers that the elementary fibres of the hypoglossal nerve are the masticatory nerves of the tongue; that the glosso-pharyngeal serves to associate the muscular actions of the larynx, pharynx, velum palati, and tongue; and, finally, that on the chorda tympani depend the articulatory motions of the tongue, and their association with the imitative movements of the face.

ABUSES IN THE MEDICAL DEPARTMENT OF THE NAVY.

To the Editor of THE LANCET.

SIR:—There are some inferences and statements in THE LANCET of Jan. 27, signed "A Naval Surgeon of the Last Century," in reply to some remarks in a former Number, from "A Navy Surgeon," which do not appear to me to be perfectly correct. The assertions of the former must *be* taken "cum grano salis." First, there appears to be great injustice done to the memory of the late Lord Melville, when we consider what was the condition of the surgeons and surgeons' mates, previous to the improvements introduced into the medical department of the service by that nobleman; nor did he or any one else suppose that this improvement was to be like "the laws of the Medes and Persians, which altered not," whilst the regulations affecting other departments were continually in progress of amendment.

It is unnecessary for me to inquire how far "the Army is better supplied with nutriments, condiments, and stimulants than the Navy;" suffice it to say, that the supplies of medicines, dietetics, utensils, especially the two last, are mean, illiberal, and inefficient. The article 21, in the "Naval Medical Instructions" referred to by your correspondent, applies only to ships in port, to which port is attached a naval hospital. As for the "wine and spirits," which may be demanded of the purser, they are, in general (except when wine is procured from the place where it is made), *unfit* for a healthy and robust seaman; far less should they be administered in disease, or to the convalescent, the spirits being often *new*, the wine *thick and sour*. It is useless to say that this objection is provided against by article 15, of the "Regulations and Instructions for the Medical Officers of her Majesty's Fleet;" for how can this be remedied in a ship, on a cruise for instance, remote from supplies? Indeed, there is seldom either of the articles before mentioned good enough for the sick in any depôt, either home or foreign. "Preserved meat" is also introduced, yet all experienced surgeons who have served afloat *in the present century* know that the restrictions upon the use of it amounts almost to a prohibition. (*Vide* article 16 in our Instructions.) In a tropical climate, moreover, if the convalescents be few, the contents of a canister, when once opened, often spoil before they are expended.

Whether the "Physician-General" has "truly and properly" represented "these disgraceful defects" to the Rt. Hon. the Lords Commissioners of the Admiralty, is not for me to determine, but for anything that appears to the contrary, it is not "too well known to admit of being doubted." If those whose office it is to correct the abuses alluded to, neglect *their* duty, surely, Mr. Editor, the omission should be brought forward in a higher quarter, for they well deserve the attentive consideration of the Legislature. I am, Sir, your obedient servant,

A NAVAL SURGEON OF THE PRESENT CENTURY.

Jan. 29th, 1838.

MEDICAL LICENCES AND DIPLOMAS OBTAINED BY A SUBSTITUTION OF PERSONS.

To the Editor of THE LANCET.

SIR:—Your admirable strictures on the certificate system, contained in a late number of THE LANCET, must be read with no slight interest by every friend to medical reform, and will, doubtless, produce their effect in the proper quarter. One of its most baneful consequences, however, seems to have been hitherto but too much overlooked, viz., the passing the examinations, both at the *London Apothecaries' Hall*, and at the College, *by proxy*. Thus, a number of young men are often turned loose on society, who have no title to rank as medical practitioners, and who are only noted for habits of idleness, and vice of every description, which have rendered them incapable of undergoing the ordeal required even at the above institutions. A case is within the cognizance of the writer, in which a young man, now practising in the eastern division of Somerset, has obtained *the medical superintendance of an Union, under the new Poor-Law*, consisting of four large parishes, and who *never underwent any sort of examination*, but obtained his diploma through a certain *firm*, located not far from Museum-street, by payment, to the principal, of some twenty guineas. In fact, the Hall and College are themselves in possession of a clue to the ramifications of as complete a system of wholesale imposition of this kind as was ever practised on the public. If the before-referred to institutions pursue the matter as they ought, we may look for some curious disclosures in the proceedings which they ought to commence forthwith. I am, Sir, yours truly,

AN OLD SUBSCRIBER.

New Kent-road, Jan. 1838.

*** The writer of this letter has added his name and address in a private note, as an authentication of his statement.

MERCURY AND SYPHILIS.

To the Editor of THE LANCET.

SIR:—In the No. of your valuable Journal for Jan. 20th, is inserted a letter from Mr. R. L. Davies, wherein he quotes J. Hunter's remark on pseudo-syphilis, "that it is nearly as dangerous, in some constitutions, to give mercury when the disease is not venereal, as to omit it in other cases which are really syphilitic. Many of the constitutions which put on some of the venereal symptoms, when the disease is not really present, are those with which mercury seldom agrees, and commonly does harm." He adds, "that Mr. Hunter has seen mercury, which was exhibited for a supposed venereal ulcer of the tonsils, produce a mortification of those glands, and the patient was nearly destroyed."

The indications for the employment of mercury are still amongst the desideratissima of our science, and still the wonder grows that no man of competent talent and experience applies himself to the task of elucidating so interesting a point, and the rather as the frequency of these cases adds not a little to our daily embarrassment and annoyance. To illustrate and confirm Mr. Hunter's position, and for the information of Mr. Davies and others who take an interest in the matter, I beg to offer you an outline of two or three cases.

1. A young man, æt. 19, having contracted a chancre, was severely mercuralised by a quack. When he first came under my notice, he had a phagedenic ulcer behind the corona glandis. Bark and opium were freely administered, local applications of various kinds employed, including nitrate of silver and nitric acid, but without success; the glands separated. Buboes occupied his groins, which assumed a phagedenic character on being laid open, giving rise, at length, to a false aneurysm of the femoral artery, for which it became necessary to tie the external iliac. This operation was succeeded by the usual symptoms of phlegmasia dolens. During this attack, inflammation of the superficial veins of the limb manifested itself; these veins suppurated, still bearing the phagedenic character; and the cartilages of the kneejoint were exposed. A sphacelus appeared in the front of the tibia; gangrene extended over the internal malleolus and anterior part of the foot, though apparently healthy granulations were thrown out from above downwards; the tibia and fibula were exposed, and their outer laminæ necrosed. It was about four months from the time when the external iliac was secured, that the leg was removed above the knee, and in about a week the young man sunk under a pulmonary affection. No tubercle was found in the lungs, or mesentery, though he was of strumous habit. Throughout his long and melancholy sufferings, he received the constant and anxious attendance of more than one surgeon of first rate eminence. Is it, Sir, too much to affirm that this unhappy youth was the victim of mercury misapplied? But I must place another case in juxta-position with this.

2. I was personally acquainted with a young medical man, who, about one and the same time, unhappily contracted a chancre, and the peculiar views of Dr. J. Thomson, of anti-mercurial celebrity; in accordance with which last, he proceeded, with all diligence, to starve himself, and apply a weak solution of morphia. By some neglect, part of the discharge was suffered to attach itself to the orifice of the urethra; phagedenic ulceration appeared; my friend grew alarmed, and the "great surgical leviathan of the north," then in the height of his glory at Edinburgh, was called in. He recommended nitric acid for the ulceration; and, learning that the patient had starved himself for nearly three months, advised a generous diet with porter. By the use of these means the ulcer presently cicatrised, leaving the patient in quiet possession of nearly two-thirds of the glans penis.

About this time secondary symptoms appeared; papulous and scaly eruptions, sore throat, and nodes; periostitis of almost every bone, except the vertebræ, and inflammation of many joints, the knees especially; for this a course of sarsaparilla was employed, and the extract of the acet. of colchicum conjointly, but without much benefit, change of air being also included. An eminent physician of Edinburgh, now no more, was consulted, who thought the pains and contraction of the joints rheumatic, as he "had never seen syphilis attack joints," and advised colchicum and hydoscyamus, with a further change of air. The patient changed the air and his physician together, and under the judicious employment of the corrosive sublimate, with sarsaparilla, he speedily regained the use of his limbs, and all his formidable symptoms gradually disappeared. I should have mentioned, that when they first appeared, the primary ulcer broke out anew, and yielded only with the constitutional affection. Though this gentleman recovered thus far, he never gained flesh, exposed himself incautiously, and ultimately died of a pulmonary affection. If we may be permitted to judge from the beneficial effects of mercury in this instance, it is, perhaps, fair to presume that my friend fell a victim to the non-administration of that mineral at an earlier period. In one young man, a bubo put on a sloughing appearance under the use of mercury, but healed rapidly under the use of bark. He was not of strumous habit; whilst another, who was, had allowed some of the discharge from a chancre to attach to the orifice of the urethra; phagedenic ulcera-

tion commenced, at first gained ground under mercury, but finally yielded to increased doses of it, though the mouth was never affected. The loss of the glans penis in this way is abundantly common, Dr. J. Thomson, annually in his lectures, used to advert to this point in his humourous way never failing to ascribe these repeated losses, to the "triumphs of mercury." I could readily multiply facts relating to this question, in common with most medical men; let each contribute his quota, and we may yet hope for something like a general rule. I have the honour to be, Sir, your most obedient servant,

REGINALD BURRIDGE, M.D.
Physician to the Taunton and Somerset Hospital.

Taunton, Feb. 5th, 1838.

P.S. The constitutional irritation resulting from the injudicious use of mercury, which gives rise to ulceration of a sloughing or phagedenic character, seems to be connected in some way with a curious and important fact, first publicly remarked by the late Mr. Wallace, of Dublin, viz., the power of mercury to suspend the granulating stage of syphilitic ulcers, which commonly cicatrise with loss of substance under the employment of mercury. In "Edinburgh Medical Essays," Vol. IV., is a case of regeneration of the glans penis after amputation for gangrene, where, of course, no mercury was employed. The patient was attended by Dr. Gibson and Mr. Jamieson, who record the case.—R. B.

CASE OF

POPLITEAL ANEURYSM

IN BOTH HAMS, WITH

SECONDARY ANEURYSM,

FOLLOWING THE LIGATURE OF THE FEMORAL ARTERY IN ONE LIMB.

By GEORGE GWYNNE BIRD, *M.R.C.S., Senior Surgeon to the Swansea Infirmary, Glamorganshire.*

DAVID PHILLIPS, aged 38, was admitted as an indoor patient at the above Institution under my care, on the 3rd of January, 1837. He was a quay-porter in this town, and had been accustomed to carry heavy weights up flights of steps, to warehouses, &c. The patient is a very powerful man, and had, for wagers, often so carried five cwt. at a time. He has lived freely and drunk hard, but chiefly beer.

The disease was first noticed by him two years since, in the right leg, but only a few weeks back in the left; the disease had latterly increased rapidly in the right limb.

On an examination of the tumours, I perceived that which was in the right ham to be considerably the larger one; the popliteal space was completely filled by the swelling, which bulged out on both sides beneath the outer and inner ham-strings; that on the left side was smaller, and had a more compact and firm feel, and did not so bulge; it appeared about the size of an orange. On the 6th of January, I observed the tumour in the right ham had increased rapidly since his admission, and I feared the sac would give way, and the aneurysm become diffused.

On a consultation with my surgical colleague, Mr. Rowland, and Dr. Cohen, one of the physicians to the Infirmary, after having made a careful stethoscopic examination of the patient's person to discover if any aneurysmal tumours existed in the trunk of the body, which we did not detect, we decided on the propriety of tying the femoral artery on the proximal side of the Sartorius muscle, which was done on the following morning, January 7th. The case did well, and the patient had no untoward or unusual symptoms following the operation; the ligature came away on the 13th day; the wound healed by the first intention, and the patient was convalescent, and able to walk about the wards in a short time.

On the 7th of March I tied the femoral artery in the left limb, but not with such an immediately successful result. I laid the artery bare, and passed the needle under it, in the presence of several medical gentlemen of this town. Before I put the ligature round the vessel, I pressed the artery on the blade of the needle, to see that the pulsation stopped in the tumour, which was the case; I then drew the thread round the vessel, and tied it firmly; the pulsation stopped in the aneurysm, and I hoped this disease would have been as rapidly cured as in the former limb; the wound healed by the first intention, as before, but in two or three days after the operation we perceived a pulsatile movement in the tumour, which had, however, considerable diminished; I was at first in hopes this motion resulted from the jerk of the vessel above the tumour; but on minutely examining the ham, and applying the stethoscope, it was found to be otherwise, and quite evident that secondary aneurysm existed; the ligature placed on the femoral artery in this last case, did not come away for seven weeks, when it was detached, with the knot and ring entire, and is still in my possession. The ring formed on the ligature in tying the vessel was of the usual size, and evidently proves that the circulation could not, even at first, have been carried on through the trunk of the artery. I am not able to state a clearly satisfactory reason for the occurrence of this secondary aneurysm, but I suppose it arose from a free anastomosis of the arteries in the limb, to which the obstructed circulation, caused by the first ope-

ration may have contributed. The tumour remained nearly stationary, from its first diminution after the operation, for some time, but rather on the decrease.

He was kept in bed several weeks, and pressure applied over the tumour and limb; when he got up he walked well, and was discharged on the 4th of May, the pulsation still existing in the tumour, but the patient was not much inconvenienced by it. I watched him occasionally up to the present time, January the 14th, 1838. The tumour has gradually, with the pulsation, subsided, and he is now perfectly well, and nearly as well able to follow his former occupation as before. Neither pulsation or tumour exists in either ham, and he says that he can carry a sack of flour as well as ever, except that he finds some weakness in going up stairs. I should here acknowledge the kindness of Mr. Lawrence, of London, and Mr. Hodgson, of Birmingham, with whom I corresponded respecting this case (to me both interesting and novel), and received the valuable suggestions and advice of those gentlemen.

RECLAMATION OF MR. NEWPORT.

To the Editor of THE LANCET.

SIR:—I observe in the last number of THE LANCET (Feb. 3), some statements in Dr. Hall's lecture on the "Nervous System," page 650, paragraphs 15 and 16, which cannot apply to any one but myself, since I am the only one of Professor Grant's pupils who attended his course on "Comparative Anatomy," in the session 1832-33, and who since that period has published a detailed account of distinct motor and sensitive columns in the nervous system of articulated animals. I beg to express my surprise at those statements, which, to say the least of them, are decided misrepresentations, there being in the first of these paragraphs a suppression of facts, which Dr. Hall himself cannot be unacquainted with; and, in the second, a statement that leads to an inference which is not correct, namely, that Professor Grant taught the doctrine of the existence of distinct motor and sensitive columns in the nervous system of articulated animals at that time as his own. In doing this Dr. Hall appears to be rendering Professor Grant great disservice, in thus endeavouring to make it appear to the public that he lays claim to my discovery of the true motor and sensitive columns in these animals; and I cannot suppose that Professor Grant is either so unjust, or so inconsistent, as to do so, since there are circumstances which, if made known, would, I trust, sufficiently prove unto whom this discovery really does belong. In conclusion, I would also observe, that there are other passages in Dr. Hall's lecture, which are not in so strict an accordance with facts as I should have supposed Dr. Hall would have considered necessary to his character, as an honourable cultivator of science. I remain, Sir, your obedient servant,

GEORGE NEWPORT.

10, University-street,
Feb. 6, 1838.

P. S. In the meantime I beg to refer your readers to my two papers on the Nervous System of Insects, published in the "Philosophical Transactions" for the year 1832 and 1834, Parts II., in each year.

CASE OF THE

PUERPERAL-MANIA PRISONER.

To the Editor of THE LANCET.

SIR:—I may, I trust, be allowed space in your valuable Journal, to answer the very uncourteous, and, as the event has proved, rather hasty attack made upon me, in a letter in THE LANCET of last week, signed "A Member of the Legal Profession," in answer to a former communication of mine.

It is a pity that the writer did not wait one little week, ere he commented in such unmeasured terms, upon my letter. Alas for the fallacy of his judgment! the jury at the *Central Criminal Court*, on the woman's trial, January 31st, brought in a verdict of "Not guilty, on the ground that at the time the act was committed, the prisoner was labouring under temporary derangement." It is evident that your "legal" correspondent, in his haste to take up the cudgels for the Coroner, has altogether misunderstood my letter. Although no lawyer, I humbly conceive that the duties of a coroner's jury and a grand jury, are not so perfectly identical as to warrant the sweeping inference which your "legal" correspondent draws therefrom. He says that, because the Judge required the Grand Jury to return a true bill, it is "clearly shown that the Coroner was right in his direction to the Jury, *the very same* direction having been given by Mr. Baron Alderson, the Judge presiding in the *Central Criminal Court*." *Audi alteram partem.* "The Coroner, in summing up, observed that *no doubt* a jury in another court, would, upon the evidence, take a merciful consideration of the case, and judge the poor woman to be confined as a lunatic for life." I leave to your readers to find the parity between these. That the Coroner was wrong in his directions (and it was to this point my strictures were chiefly directed) is clearly proved by the Jury, on the poor woman's trial, acquitting her, on the ground of temporary derangement,—the object to prove which I strove. We all know, albeit not "members of the legal profession,"

that the prerogative of mercy is vested in the Crown; but surely that does not prove that a coroner is right in going out of his way to be *merciless*, prejudging the verdict of a higher tribunal, and thus, as you, Sir, very properly observed, prejudicing the case of the accused when brought for trial before another tribunal. As there is not one sentence in my former letter bearing out the writer in his assumption of my ignorance of the above very trite fact, his statement is as incorrect as his remarks are unjustifiable.

On the concluding sentence of that letter I will only deign to remark that such personal observations from an *anonymous* writer become the extreme of illiberality, and are only excusable from the zeal of the partisan.

I am, Sir, your obedient servant,

J. M. Brown.

Feb. 5, 1838.

*** There is no man in the profession who can have failed to applaud the prompt, humane, and correct manner in which Mr. Brown came forward on behalf of the poor woman who was the subject of his communication.—Ed. L.

FUMES OF BURNING CHARCOAL.

To the Editor of The Lancet.

Sir:—As the newspapers, within the last few days, have contained numerous accounts of persons who have lost their lives from incautiously retiring to rest with burning charcoal in their rooms, perhaps you will permit me to offer to the public, through your widely-circulated Journal, a cheap, simple, and efficient plan for the prevention of such melancholy accidents. I would propose, then, that a large vessel, a tank of lime-water, should be kept in all rooms, cellars, &c., in which charcoal is employed as fuel, the effect of such lime-water being the rapid absorption of the carbonic acid generated by the charcoal (giving rise to the formation of chalk), and the consequent withdrawal of this deleterious gas from the air containing it. I, of course, suppose the apartments, or places, in which the charcoal is used, to be properly ventilated, it being evident that if this be not the case, the air within them would be rendered unfit for the support of life, simply by the abstraction of its oxygen, consequent on the process of combustion. I remain, Sir, your most obedient servant,

Jan. 29, 1838. W. H. O.

ASSURANCE OFFICE FEES.

To the Editor of The Lancet.

Sir:—You have alluded in your columns, of late, to the refusal of Insurance Companies to remunerate medical practitioners for a certificate of the health of the parties assuring at their offices, but though myself individually interested, in common with my professional brethren, I must candidly avow that I do not feel such a demand can be made, either in justice or generosity. To qualify a medical man to give adequate information, he must be well acquainted with the habits and persons of the parties insuring, consequently he *must* have enjoyed their confidence, and, in *all probability*, have benefitted by their remuneration; and is it, in return, too much to expect that he should give a gratuitous opinion on a subject so vitally important to their interests?

The application, if not directly made by our patients, is at their instigation, to secure a benefit to themselves and families; they are the party *seeking* the protection of the Insurance Company, and, consequently, our certificate is as important to them as to the office.

A private friend, conversant with the domestic character and habits of the individual, is also referred to. Should we not scorn the sordid avarice that would desire to barter for such a trivial act of service? Yet the representatives of a noble profession demur to give their unrequited opinion.

Mutual assistance and co-operation are necessary in every contract of life; if a man seek a responsible situation, his integrity and probity must be guaranteed; if even we require a servant we expect a character; no compact of any kind is cemented without due caution and investigation: why, then, is an Insurance Office to be exempted from an universal benefit? or why are they alone expected to pay for such information as all parties and classes give and receive gratuitously? I am, Sir, your obedient servant,

Matthias Rowe.

24, Woburn-place, Jan. 31, 1838.

USELESSNESS OF MEDICAL MEN IN AUSTRALIA.

To the Editor of The Lancet.

Sir:—Having lately returned from Australia, where I was persuaded to go as the surgeon of a ship, for the expense of my passage, under the assurance of there being a great demand there for medical men; through the medium of your much-read Journal, permit me to put young men on their guard against such an impudent imposition. The climate is the finest in the world; there is an abundance of every thing at a cheap rate, plenty of employment, and the labourer is well paid. Raiment and fuel are, also, almost not needed; they have there neither endemics nor epidemics, and the consequence of all this is, *health of*

the highest order; and this the more marked from the improvement of the health of all emigrants, by the long voyage passed through a fine climate all the way, cheerful society, rest, good living, and the hope of bettering their condition; with the novelty of the charmingly changed scene and climate on arrival, and thereafter. However, let no man go as a surgeon without ample remuneration, bargaining also to be *brought back*. If he do not this, he must become a clerk, or a cattle driver; or he must starve.

I am, Sir, your obedient servant,

MEDICUS.

MEDICAL WITNESSES AT THE COTTON SPINNERS' TRIAL.

To the Editor of THE LANCET.

SIR:—Although the surgeon who saw Smith, the cotton spinner, who was shot at Glasgow, in *a few minutes* after the receipt of the injury, was neither precognised nor summoned to give evidence on the trial, yet the M. D.'s who did *not* see the unfortunate man for *nearly fifteen hours* after he was shot, had *the influence* to get summoned as medical witnesses at the trial, and were paid from the public purse at the rate of abont 20 guineas each. One or more of them, in fact, did not see Smith at all until he was dead. They are—

Dr. James Corkindale, Surg. to the Gaol and Bridewell.

Dr. John Spittal, Surg. to the Police Establishments.

Dr. J. M. Pagan, attending Surg. of the R. Infirm.

Dr. Wm. Auchinloss, colleague of Dr. Pagan.

In too many instances a similar neglect on the one hand, and a subserviency to private influence on the other, is conspicuous in cases of sudden or violent death in Scotland, where the coroner's court is greatly needed.

I am, Sir, your obedient servant,

Edinburgh, Feb. 2, 1838. F. T. S.

MECHANICAL TREATMENT OF THE ITCH.

THIS method, first proposed by Dr. Köhler, which consists in rubbing the parts affected with itch with finely-powdered brick-dust, was extensively tried in the *Berlin Hospital*, during the last half of the year 1836. The number of persons treated amounted to 578, and the mean duration of treatment was 18¼ days for each patient. The mean period of treatment with sulphur-ointment had been previously ascertained to be fourteen days only. Relapses, also, occurred much more frequently under the former method of treatment, which was accordingly andoned.—*Berlin Med. Zeit.*, No. 13, ab

THE LANCET.

London, Saturday, February 10th, 1838.

IF it be true that "*union* is power;" if, on the other hand, it is not less certain that "a house divided against itself cannot stand," then, assuredly, are the medical institutions of this "great" and "enlightened" country in a state of decadence, and on the brink of dissolution. To prevent misconception we may declare at once, that, by "medical institutions," we do not mean to designate any establishments which have aught to do with the *science* of medicine,—which, happily, in spite of the obstacles that are continually thrown in its way by collegiate corporators and monopolists, progresses with a slow yet steady pace,—but those executive bodies which are denominated Universities, Colleges, Halls, and Companies, and which, under the pretext of administering our medical affairs, have succeeded in throwing them into thorough disorder and confusion. We have often arraigned, at the bar of public opinion, the causes that have produced a state of things which has become so insupportable, that almost every member of the profession in these kingdoms has, at length, joined in demanding some comprehensive measure of medical reform, which, in lieu of the heterogeneous materials that now compose the governing bodies of the profession, shall institute a single directing power, possessing unity of purpose and uniformity of action. In order to show yet more clearly the nature and extent of the evil which predominates over the medical profession in this country, we shall briefly pass in review the host of ruling bodies which successive Acts or Charters have authorized to regulate our medical affairs. Judging with common sense, it would appear to be natural that as England, Scotland, and Ireland form a "united" empire, so one medical institution and system of medical law, should prevail in all, for although different customs

may render a dissimilarity of statutes upon other points expedient, medicine is a science which admits of being, and which should be, practised and regulated with uniformity in all parts of the same great kingdom. But instead of this suitable and essential simplicity, this "union," which would be "strength," there actually have existed,—dating from the incorporation of Barber-Surgeons down to the time of the self-appointed corps of practising druggists, not less than seventeen different and distinct bodies which, each after its own fashion, has enacted laws for the government of medical men, or appointed systems of education, or qualified or disqualified for practice,—all according to the dictates of ignorance, prejudice, or self-interest. It were too fatiguing, not to say too disgusting, a task to repeat the history of the seventeen different bodies. Some of them are of Parliamentary birth. The rest are the offsprings of Royalty. Five exist in London, viz.—the Colleges of Physicians and Surgeons, the Apothecaries' Hall, the new-born University of London and the Archbishop of Canterbury. Two in the more central counties of England, Cambridge and Oxford. Two in Edinburgh. Four in other parts of Scotland, viz.—the Universities of Glasgow, Aberdeen, and St. Andrews, and the Faculty of Physicians and Surgeons of Glasgow. Finally, Ireland contains four, viz.—the University of Dublin, the Colleges of Physicians and Surgeons, and Apothecaries' Hall. In all, seventeen bodies corporate or non-corporate, existing by virtue of Acts of Parliament, or chartered by Royal prerogative, disseminating discord in a profession the members of which should, above all others, work together for the general welfare of the community. Did there exist the slightest indication of these institutions having ever acted in any manner, however trifling, for the promotion of a common end, there might be less objection felt to them on the score of numbers; but each is seen to pull *from* a centre instead of towards it, regardless of every right principle of action, and of the sound advice of the sage who pronounced to all the world that "union is strength,"—looking with eager eyes only to personal aggrandisement, generating discord and selfish squabbles, in place of diffusing sound knowledge and harmony of thought. The whole profession must anxiously await a division of the several cords at which they strain, and the gratifying exhibition of a pell-mell sprawl to the north, south, east, and west, as they fall abroad, prostrated to the earth by the sharp and effectual cut of the sword of reform.

Even if the intentions of those by whom our governing medical institutions were created were of the best kind, a lamentable specimen, at least, is afforded in them of the extent to which good designs may be abused as time advances. If the progression of medicine, as a science, and, as a consequence, the welfare of mankind, were the original objects for the attainment of which medical corporations were instituted, the multiplicity of foundations has mainly contributed to defeat those objects, by engendering a number of conflicting and contrary interests. Thus, for example, the Fellows of the *College of Physicians*, having obtained domain over the capital of the British empire and its environs, seem to think that medical knowledge exists nowhere beyond the limits of their own puny kingdom, and their efforts during the last three centuries have been solely directed to the conservation of the monopoly conferred on them by the charter of HENRY VIII. The well-known acts of the College have accumulated, on its members, such a load of odium, that they have been at length compelled to make a few insignificant concessions to public opinion, which nothing, save the fear of imminent destruction, could have wrung from them. Again, what is the conduct of the *Royal College of Surgeons?* what *has* it been? What would it *ever* be? A system of shameless plunder. The management of this chartered body has been conferred upon a self-perpetuating junto, to the exclusion of the great mass of its members, and, in

order to preserve their powers, there is no iniquity in legislation which they are not ready to perpetrate. Teachers of medicine themselves, by profession, they assume the power of "recognising," as legitimate instructors, only a certain few, as rivals in the medical schools of England; for when medicine is made a trade it is convenient and profitable to limit the number of competitors. As surgeons, they have seized upon the metropolitan hospitals, and, with unblushing effrontery, they publicly affect to consider them as heir-looms, to be handed down from father to son, from uncle to "nevey," from master to apprentice, without regard to qualification or capacity in the successor. Observe the election now on foot for the lately-vacated offices of surgeon and assistant-surgeon at *St. Bartholomew's Hospital*. Mr. STANLEY, as a matter of "right," succeeds Mr. EARLE, Mr. EARLE having, as a matter of "right," succeeded some one else, and some apprentice of Mr. STANLEY expecting to succeed that little gentleman,—probably erroneously, however,—by-and-by; while the candidates for the office of assistant-surgeon plead, in the public journals, not their experience and extent of surgical knowledge, their well-known assiduity and character for humanity; nor do they place themselves in any position which shall afford the opportunity for testing these important qualities. No. They are urging their *apprenticeships* to a WILLIAM LAWRENCE or a HENRY EARLE, and virtually submitting to the view of the misgoverning "governors" stamped receipts for five-hundred-guinea fees, in the form of "indentures of apprenticeship." As well might a footman claim to be a Member of Parliament because he had daily served the dinner of an apostate Member for Westminster.

If from the College we pass to the Hall, a different kind of monopoly presents itself to view. There a distinct interest has been created by legislative enactment, and conceded to a corporation of shop-keepers and pharmaceutists,—at one and the same time a *trading* association, and a *soi-disant* scientific body. In its former capacity it must prosecute interests which are totally distinct from those of science, for the dealer in drugs has one object in view, and the dispenser of them another.

Even had the great power thus conferred on the drug dealers of Blackfriars been justly exercised, and employed only in a crusade against quacks, instead of against qualified medical men, an unwarrantable source of mischief would have been created in the Apothecaries' Act. But if any portion of the Act of 1815 can be regarded as a greater grievance than another, it is the clause which confines the privilege of dispensing his own medicines to the licentiate of Rhubarb Hall, thus adding another element of discord to those by which British practitioners were already distracted. But cooly to effect the ruin of so many able men as have been persecuted under its provisions, with a public avowal and lamentation that more were not prosecuted, because the funds of the infamous corporation did not permit the expensive powers of the law to be directed against them;* this fact, we say, exceeds in enormity the ordinary crimes of even the worst corporate bodies, in the worst of times.

In London, then, we have three ruling institutions of almost unmatched viciousness, not even united in the spirit of vice, for each unquestionably regards the other as its enemy and rival, because there is amongst them *no sharing of the plunder*, no *common purse*, the profits of marauding, —one *robbing more* than the other, and withholding a *fair partition of the spoil*,—each existing to the *loss* of its contemporaries.

The *Universities* of *Oxford* and *Cambridge* need not detain us long. Although endowed with the power of conferring degrees in medicine—closet medicine—they regard with utter indifference medicine itself. The Church offers more favourable subjects of speculation for aristocratic

* See the evidence of its members in the Parliamentary minutes.

youths, and "where the carcass is, there will the hungry congregate."

Scotland presents a picture of discord and division, with respect to its medical institutions, not less melancholy than does England. Four Universities and two Faculties are there busily employed in the profitable work of dubbing; the character and "greatness" of each school being measured, not by the celebrity of its teachers, but by the amount of fees which its professors can pocket in the course of a session. Many years have not elapsed since one Scottish University,—so devouring was the "auri sacra fames,"—conferred degrees on the absent. Mr. EADY, or Mr. BRODUM, or Mr. JOHN LONG, might have become "M.D." at one of those institutions, on contributing ten pounds, or thereabouts, to its treasury. Even at the time that we write, Edinburgh is pouring forth her lamentations because the pupils flock to Glasgow in such numbers as to threaten a considerable deficiency in her yearly receipts; and, indeed, so anxious was the Council of that University to keep its customers, that they endeavoured to abolish the most useful course of lectures there delivered, for the avowed purpose of enabling it to compete with the pecuniary terms of the schools of Glasgow, —an act of vileness which drew forth a rebuke from the Minister of the Crown, bitter and correct as it was becoming and deserved, — the Metropolitan University standing painfully admonished, that "the "way to advance the interests of science, "and secure to the public the advantages of "high professional knowledge, is not by "lowering Edinburgh to the level of Glas- "gow, or that of any other Scotch Univer- "sity, but by endeavouring to raise the "latter to the higher standard."

In Ireland, the same mischievous diversity of interests and clashing of ordinances are found. Four contending parties here dispute for power; the Metropolitan University, the two Colleges, and the Apothecaries' Hall. The efforts of the former have always been feeble; Medicine finding little or no encouragement or protectio from the priestly directors of *Trinity College*; but, as if to compensate for this lukewarmness, a battle now rages with the utmost fury between the *College of Surgeons* and *Apothecaries' Hall*, each party accusing the other of infringement of rights and privileges. "Rights," indeed! They fight for the privileges of *monopoly*. Under this curse it is that the mass of the profession in the three countries labours,—and a truly hydra-headed monster has it to encounter, gnashing most furiously its teeth at seventeen different points. Well may the patience of the medical profession, and the forbearance of the public, be at length worn out by the miseries engendered by seventeen such greedy and successful seekers of prey amongst the most valuable portion of the community.

The consequence of such a condition of medical affairs every day becomes more palpable. A community of interests among the victims of misgovernment will inevitably lead to a concentration of rank and privilege in one general institution, whose existence we have so often indicated and advocated,—a tripartite NATIONAL FACULTY OF MEDICINE, from whose councils shall emanate the means of regulating the profession, under wise and uniform laws, deprived of all private pecuniary interest in hospitals and schools in which medicine may be taught; connecting, in a word, the now infinitely divided members of the profession, in the bonds of brotherhood, directing their public affairs with one common consent, and professing to advance science by legitimate means alone. The institution of such a Faculty will afford us *something*, at last, for which to be thankful at the hands of the Legislature of Great Britain, hitherto grossly negligent of medical reforms, and too culpable as consenters to medical abuses.

UNIVERSITY OF LONDON.

AFTER considerable discussion, on Wednesday last, the Senate of the *University of London* decided, we understand, that the *Greek Testament* and *Scripture History* should

not form a necessary part of the examination for the degree of Bachelor of Arts. Those who have devoted much time to these studies, and desire to recommend themselves to the world by this species of theological erudition, may obtain "certificates of proficiency;" but this will be no more indispensible than proficiency in Greek Mythology.

IRREGULAR PRACTITIONERS.

If we have given admission in the present Number to the letter of a charlatan, it is merely for the purpose of showing to what a pitch the temerity and impudence of such gentry may be carried, in the absence of legislative enactment for the suppression of quackery.

MEDICAL SOCIETY OF LONDON.

Monday Feb. 5, 1838.

Mr. BRYANT, President.

ENCEPHALOID DISEASE OF THE PANCREAS, PRODUCING COMPLETE OBSTRUCTION IN THE DUODENUM—INTUSSUSCEPTION—CONSTIPATION.

Mr. NEWTH related the following case:—On the 13th of January he was called to visit a man, aged 49, of a sallow complexion, and whose countenance was indicative of the presence of organic disease. He (Mr. N.) had attended him on a former occasion for an affection resembling angina pectoris, accompanied with bilious vomiting, and afforded him relief by the use of aperients and antispasmodics. The patient had been ailing for many years, and had formerly been under the care of Dr. Farre, who had recommended occasional small bleedings. He had constantly suffered from dyspepsia, the least irregularity in diet producing great uneasiness. The prominent symptoms of the present attack were—distressing vomiting, excited by taking even the smallest quantity of food, the ejected matter being of a very offensive odour, dark colour, with a sediment like coffee-grounds, and amounting to about a quart at each attack, several attacks occurring in the 24 hours; pain in the right hypochondriac region, increased on pressure, and extending along the margin of the ribs as far as the ensiform cartilage. On examining the abdomen a pulsating tumour was discovered, situated about an inch above, and to the left side of the umbilicus. The tumour was not tender, but when handled excited vomiting The tongue was clean, and continued so throughout the disease; the pulse was about 70, and feeble. A few ounces of blood, by venesection, were taken away, at his own request, by which the pain was relieved; the vomiting, however, continued unabated. Two days previous to Mr. Newth's attendance the bowels were much relaxed, but they afterwards became obstinately constipated, the enemata which were administered returning immediately, and causing him great pain. A motion, which had the appearance of lumps of clay, passed on the 19th, the first one since the 11th. The bowels were never afterwards opened. His thirst was extreme; but the moment he swallowed water, for which he craved incessantly, the vomiting recurred. The symptoms remained much the same till the 1st of February, when he died.

On examining the body, the skin was of a yellow tinge, and had a peculiar leather-like feel. The body was not so much emaciated as might have been expected; the thoracic viscera were remarkably healthy; the stomach was distended with air, and contained about a pint of fluid. The intestines, with the exception of the cœcum, which was distended with air, were much contracted in calibre. On raising the pyloric end of the stomach, the pancreas was discovered very much enlarged with encephaloid disease, which spread in all directions, and affected the viscera with which it came in contact; it spread to the right side, and pressing upon the duodenum, produced a stricture of that intestine; it affected the gall-bladder, which contained a number of calculi, but no bile; it had contracted adhesions with the liver, which was of a mottled appearance, and contained portions of encephaloid matter. On the left it passed round the aorta, hence the cause of the pulsation, and even descended into the pelvis. The kidneys were affected with the same kind of disease, and the adipose tissue which remained seemed altered in its structure, approaching the appearance of the encephaloid matter. The mesentery was thickened with a deposit of opaque matter between its layers.

Dr. WHITING spoke at considerable length on the subject of obstructions in the alimentary canal, a class of diseases which were often a subject of great perplexity to the practitioner, it being occasionally impossible to arrive at an accurate knowledge of their cause. The disease in the case under consideration he believed was very rarely productive of such obstruction; he had never known it have such an effect, though he had seen an instance in which disease of the pancreas had produced fatal jaundice by obstructing the secretion of the liver. He thought there were some cases of obstruction in the alimentary canal, the causes of which

a knowledge of the pathology of the duodenum would enable us to determine. There was a form of disease not often adverted to by pathologists, consisting in a distention of the duodenum, which produced all the symptoms of gall-stones, and for which disease, indeed, it was frequently mistaken, the paroxysms of pain resembling those present in that affection. In this affection of the duodenum, which was a kind of colic high up in the alimentary canal, there was constipation, vomiting of bilious matter, jaundice from pressure on the gall-ducts, cool skin, slow pulse, and partially suspended respiration; the disease, however, was not a formidable one, and if properly attended to the patient did well. Intussusception, which occurred most frequently in children, was also another cause of complete obstruction of the alimentary canal. He had seen at least three cases of this kind; one had lately come under his notice; in this instance the constipation lasted nine days; he had seen the child at the expiration of three days; he found a tumour in the left groin exactly in the situation of the sigmoid flexure of the colon, obstinate constipation, small quantities of blood passing per anum; there were frequent paroxysms of pain, stercoraceous vomiting came on, and the little patient gradually sank. He had no hesitation, on first seeing the child, from the symptoms present, to declare that the case was one of intussusception, and that it would prove fatal. Dr. Blundell, who was also consulted, gave the same opinion. After death it was found that the sigmoid flexure of the colon was the containing part, its contents consisting of two-thirds of the colon, portions of the ileum, mesentery, and omentum; these had become agglutinated together, and formed a dense mass in the sigmoid flexure, and when exposed the appearance it gave was that of a sphacelated penis. This was not a disease which destroyed rapidly, for though the child had not been ill a fortnight, he thought the symptoms did not show themselves until the alimentary canal became much impeded. In this case the child had suffered from sickness, and loathed its mother's milk, before any other symptoms came on, and there was no obstruction to the passage of the fæces, for three days after there was a copious stool; the more urgent symptoms only showed themselves as the disease advanced, and the canal became completely obstructed by thickening of the intestines, &c., producing complete obstruction. In the case in question he believed that the intussusception had existed a long period; indeed, he thought that there was a congenital looseness of that part of the alimentary canal which was implicated in the disease. Minor cases of intussusception, in which there were no symptoms to indicate the disease during life, were frequently observed post-mortem; these cases were never fatal. Cases of intussusception most frequently occurred in children. In the three fatal cases he had seen, one child was between five and six years of age, another about three years, and the third five or six months. When such symptoms as those mentioned in the case he had related were present, he thought there was no difficulty in at once deciding that the disease was intussusception, and that of a fatal character.

Mr. DENDY said, children were frequently, and almost the only, subjects of intussusception; the disease was generally removeable. He had seen as many as thirteen intussusceptions in one child, in whom the disease was never supposed to have existed. He had never known a case, except the one related by Dr. Whiting, in which intussusception from above had proved fatal to a child; he thought where constipation existed in children free from cerebral disease, that intussusception might be suspected, as they were not subject to many of the common causes of constipation, such as the collection of hardened fæces, torpidity of the bowels, or the occurrence of morbid growths.

The PRESIDENT thought intussusception was not so frequently present in children as some suspected. A case had occurred to him twelve years since, which made a deep impression on his mind. An eminent surgeon also saw the case, and the opinion given was, that it was more than probable intussusception was present. In this case the child was three years old, and had never had a passage through its bowels for three entire months, every particle of food taken being vomited up; profuse diarrhœa came on a few days before the child died. On opening the abdomen it was ascertained that no intussusception existed, but the coats of the colon had become so much thickened by inflammation as to produce considerable narrowing of the canal; the patient perished from inflammation of the muscular coat of the colon destroying the power of expelling its contents. He remembered a case of intussusception occurring in a woman, in which the whole of the colon from the sigmoid flexure to the ileum passed per anum, and yet she lived for ten days afterwards.

WESTMINSTER MEDICAL SOCIETY, *Feb.* 3.—At the special meeting held this night there was a large attendance of members, the majority of whom supported the Committee, who have refused to receive or pay for the Report on Arsenical Candles, which they say was printed and published contrary to the written laws of the Society.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF WHITLOW.—REMOVAL OF THE FINGER.

Ann H., aged 50, was admitted Dec. 11th, 1837, under the care of Mr. Liston. She says, that about three weeks ago she pricked her ring-finger, opposite to the middle phalanx; she had not taken much notice of it until the day after, when it began to swell; she applied to a medical man, who lanced it, and ordered poultices; these she applied, but without benefit. Other treatment was subsequently employed, under which the finger on the palmer surface, to the extent of two of the inner thirds, and also the inner third on the dorsal surface, sloughed away. In this state she was admitted into the hospital. The flexor tendons were exposed and sloughing away. Mr. Liston detached them entirely with scissars.

INJURY TO THE FOOT.—AMPUTATION OF THE LEG.

Henry Compton, aged 25, was admitted Dec. 29, 1837, under the care of Mr. Liston. He is an engineer, of rather robust constitution, has been in the habit of drinking large quantities of beer daily. Last night he supped with some friends and partook largely of beer and spirits. About 2, P.M., this day, he was engaged in directing the engine, followed by a train of waggons containing ballast, along the London and Birmingham Railway, near Harrow; several of the rails were removed to be replaced on a more proper level; timely notice not being given of this he was not able to stop the engine (which was proceeding at considerable speed) before arriving at the spot. Knowing the catastrophe that would occur he determined on leaping off the engine, and in the act of so doing, the breaking-iron of the next carriage, he thinks, struck his right foot, and thus raising his heel he was thrown a considerable distance. This was effected so rapidly that he hardly knew he was injured, but on examining his foot he found the shoe extensively rent, and, after removing it, the foot greatly injured. He was brought to the hospital about 5, P.M.

Present state.—The right foot altogether appears considerably swollen; the integument on the dorsum of the foot feels soft and doughy, appearing to be infiltrated extensively with extravasated blood. Near the inner side of the ball of the great toe is a small wound, which bleeds only when the surrounding integuments are pressed, and in the sole a deep lacerated wound, extending from about the distal extremity of the os calcis to about an inch from the clefts between the toes; this bleeds rather freely. The edges are considerably separated, in consequence of the swelling from the extravasation of blood. In the bottom of the wound is seen the plantar fascia and portions of lacerated integuments. The metatarsal bones are comminuted, the tarso-metatarsal joint appears to be involved in the injury. The blood discharged from the openings in the foot is mixed with a considerable quantity of oily fluid.

Mr. Liston was immediately sent for, and thought the injury such as to require immediate amputation of the leg, as being the safest way of bringing the patient through the consequences of the accident. The patient would not consent to the operation at first, but after some time he was persuaded by some of his friends to submit: About 12, P.M., the foot appeared to be more swollen, and was exceedingly painful. A red flush was observable on the dorsum of the foot, and appeared to be extending gradually upwards. Pulse full, strong, 90; some thirst.

30. About half-past two, A.M., Mr. Liston proceeded with the operation at the juncture of the middle with the upper third of the leg. A semicircular incision, convex downwards, was first made in front of the tibia, and, after the integuments were dissected somewhat upwards, the limb was transfixed at the posterior aspect of the bones, and a bevelled flap, cut downwards and backwards, of sufficient length to cover freely the ends of the bones; and after dividing the interosseous membrane, vessels, &c., the bones were sawn through in a perpendicular manner, first the fibula, and then the tibia. Several ligatures were applied, and the edges brought together by four sutures. The patient was then removed to his bed with a piece of lint steeped in cold water applied to the stump. It is unnecessary to record the further progress of the case; the man has been doing well, and is now convalescent.

In lecturing on the above cases, Mr. Liston made some general remarks on amputation. He spoke of the necessity of avoiding the operation if it could be possibly done, and also of its being less frequently resorted to at the present day than it was formerly, the improvements in physiology and pathology having enabled the surgeon to treat disease better. On the other hand, it would be absurd to suppose that amputation would be altogether done away with. Mr. Pott, in his admirable chapter on the treatment of injuries, had enumerated a number of cases in which he considered amputation indispensable. In some of these more modern surgeons did not see such necessity; so aneurysm, occurring in any of the limbs, was only to be cured by amputation, no other plan of treatment, at the time he wrote, having been found successful. The contemporary of Mr. Pott, however, John Hunter, showed the true method of treating aneurysm. Among the cases at the present

day in which amputation was called for were those resembling the case of paronychia related above, in which the injury of the integuments and tendons was severe, and the disease had spread to the joint. There could be no doubt of the propriety of removing such a part, for though it might possibly have been retained as a useless member, it would have been at the expense of great suffering to the patient and of danger to her health. It did not follow, however, that in all cases in which one flexor tendon in a finger was destroyed, or the bone partly necrosed, or even the joint implicated in the disease, the part was to be sacrificed; it was sometimes possible, by means of position and rest, secured by splints, to effect a cure. In cases where the disease was extensive, amputation was the only plan to be resorted to; it sometimes became necessary to amputate on account of an intractable warty ulcer over the point of the elbow, ankle, or other exposed situation in which it is exceedingly difficult, or impossible, to keep the parts in a proper position for healing; so in a case recently admitted into the hospital in which he (Mr. Liston) had amputated the arm in which an ulcer over the olecranon process existed, the ulcer was threatening to become malignant, and was wearing away the health of the patient. She requested that the limb might be removed; he had consented to such proceeding as the best means of affording relief to the patient.

In the case of the man with injury of the foot this would have gone on rapidly to mortification had the limb not have been removed. There were three stages after such an injury, in which amputation might be performed: the first was before inflammatory fever was lighted up in the system, and this was within the twelve or sixteen hours immediately following the receipt of the accident. The next period at which amputation might be performed, was after mortification had set in, which, occasionally, in some cases, spread with great rapidity, so that in twenty-four hours the whole thickness of the limb might be involved; occasionally, the progress of the disease was less rapid, owing to the injury being less severe and the constitution of the patient better, in such instances the gangrene might be several days in involving an entire limb. The kind of gangrene under consideration proceeded very differently from constitutional gangrene, when the disease arose from obstruction in the arteries, or veins of the limb. The first kind of gangrene was much more rapid in its progress, and no line of separation between the living and dead parts was to be expected; while, in the constitutional gangrene, the disease spread less rapidly, and might be several weeks before it reached the middle of the limb, and might ultimately stop under proper treatment. The third period at which amputation might be performed after injury, was in cases of compound fracture, when the injury was not sufficient to produce mortification, but gave rise to violent inflammatory action, and extensive suppuration. When the discharge was wearing out the power of the patient and he had become hectic there was no choice left but to remove the limb. In the case under consideration the injury was too extensive to admit of delay—further postponement of the operation might have been fatal. The chance of recovery by amputation during the spreading of gangrene, with great constitutional disturbance, was very small. Mr. L. had seen only a very few recoveries under such circumstances.

DIFFICULTY OF DIAGNOSIS IN CASES OF ABDOMINAL TUMOURS.

In lecturing on the case of cyst in the pelvis, detailed at page 531 of the present volume, Mr. Liston observed, that it was not an uncommon circumstance to find hair in tumours connected with the ovaria; hair, also, had been found in tumours situated about the eyelids, in the neck, and other parts; teeth were also frequently found in ovarian tumours. The diagnosis of cases of abdominal tumours was very obscure and difficult; frequent mistakes were constantly being made. In some instances tumours supposed to be solid were afterwards found to be encysted, while encysted tumours were occasionally mistaken for solid ones; tumours in the abdomen had sometimes been cut down upon in order to be removed, but the attachments of their growths were so generally extensive and firm as to render all such attempts futile. To illustrate the difficulty of forming a correct diagnosis in abdominal tumours Mr. L. related a case in which it was supposed that extra-uterine fœtation had occurred:—The young woman, a servant in an hotel, had kept company with a young man; the catamenia had ceased, and other signs of supposed pregnancy followed; she went to a distance to be delivered, away from her relations, to conceal her shame. The usual period of pregnancy passed over. The faculty of Glasgow supposed that the case was one of extra-uterine conception. Her friends discovered the retreat of the patient, and brought her to Edinburgh, where the same opinion prevailed amongst the medical men consulted. The head and ribs of the child it was thought could be distinctly felt; the poor girl was in the last stage of consumption, and soon succumbed. Her uterine system was quite sound, the tumour was found to be the omentum filled with tubercular matter in masses of various sizes; a very beautiful specimen of a portion of this membrane was exhibited. Mr. L. remarked, that it was a fortunate circumstance that the patient was in the deplorable state above

described, and that she speedily died a natural death; there would otherwise have been a great risk of her having been subjected to a severe and dangerous proceeding, viz., the division of the abdominal parietes, which was at that period rather in vogue. Regarding the removal of the fluid from encysted tumours the introduction of a trocar for this purpose was occasionally admissible, but its use required the greatest caution. Sometimes after the removal of the contents of the sac it would generally fill again very rapidly, and continue to do so after each operation. The employment of a ligature to encysted tumours had been proposed, and one or two cases, it was said, had been treated successfully by this mode; in general, however, the attachments were of such a character as to render the proceeding of no utility. It was very difficult to know the nature of solid tumours of these parts, and still more so to remove them, it being impossible to ascertain beforehand the extent of their attachments. Palliative treatment was generally that which should be adopted.

DISCHARGE FROM THE NOSE.—HYDRIODATE OF POTASH.

A. W., aged 28, was admitted Nov. 28, under the care of Dr. Elliotson. Always enjoyed good health until last Christmas, when she was attacked with pains in the forehead and nose, attended with a discharge of a thick yellowish matter from the right nostril. The pains of the forehead have of late become more violent, and the discharge accompanied with a smell like that arising from putrid meat. Till within the last few months the patient has been under the care of a surgeon, who treated the case antiphlogistically, without producing any relief. She had syphilis fourteen years ago.

At present she suffers from darting pains in the head, which are more severe at night. The fore-part of the head is more affected than the back; the face has a bloated appearance; the lower eyelids are swollen. There is a darting pain in the right eye, attended with an increased secretion of tears, which run down the cheek. There is pain, on pressure, over the right lachrymal duct; the breathing through the right nostril is slightly affected; the mucous membrane of the nostril is of the natural colour. The secretion from the nostril is thick, and somewhat of the form of the cavity of the nose. Bowels constipated; pulse 85, and weak; mouth slightly affected from mercury. To have three grains and a half of the hydriodate of potash in solution, three times daily.

Dec. 2. Pain in the head less. Four grains and a half of the medicine for a dose.

7. Pain less on alternate days. Five and a half grains to be taken for a dose.

9. Still improving. Increase the hydriodate to seven grains.

12. Discharge from the nose increased. A small piece of bone, the size of a pin's head, came away the day before yesterday.

17. Went on improving until to-day; the discharge is much less, and the fœtid smell almost gone. She left the hospital at her own request.

CHARING-CROSS HOSPITAL.

INJURY TO THE PERINEUM. — RETENTION OF URINE.—NOVEL PROCEEDING IN CATHETERISM.

We have seen a patient who was lately admitted into this hospital, on whom a novel kind of operation was performed. He is a youth, nineteen years of age, and came under the care of Mr. Howship on the 17th of January. It appeared that the patient, the day before his admission, fell over a low door, the edge of which coming in contact with his perineum, severely contused it, but the integuments were not lacerated. The following morning a medical man attempted to pass a catheter to draw off some urine which had collected in the bladder, but not succeeding the patient was sent to the hospital. On his admission there was a soft swelling in the perineum; the bladder was somewhat, though not urgently, distended. Fomentations were applied over the pubes, and the remedies usually employed in retention of urine had recourse to, but without effect; the catheter was attempted to be passed, but blood only followed. On the 18th, as the bladder was very much distended, and the patient suffering much from it, Mr. Howship found it necessary to puncture; he accordingly did so above the pubis, by which means three pints of urine were removed, to the great relief of the patient, who went on well till the 25th, on which day Mr. Howship determined on adopting further means to enable the patient to void his urine through the natural passage. For this purpose he had the patient placed in the position for lithotomy, and passing a moderate-sized flexible metallic catheter, with a conical point, through the penis, to the lacerated portion of the urethra, he made an incision in the perineum, near the raphe, setting free a large coagulum of blood, and exposing the end of the instrument. The operator then passed a second metallic catheter, which had its extremity opened; this instrument he introduced by the wound above the pubis, through the bladder, into the vesical extremity of the urethra, downwards and forwards, to meet the other instrument at the lacerated part of the urethra. He then fixed the point of the first into the open ex-

tremity of the second catheter, and pressed the former gently onwards into the bladder, the whole operation being conducted with the greatest facility. The urethral catheter is retained in the bladder, and the wound above the pubis, at present, kept open. The patient is doing well in every respect.

BRIDGNORTH AND SOUTH-SALOP INFIRMARY.

LITHOTOMY.

A BOY 3 years old, was admitted, Nov. 10, with distressing symptoms of stone, which had been observed from birth. He was sounded and a stone detected in the bladder.

Operation.—The patient being properly secured, Mr. I. M. Coley took the smallest sized staff, and had much difficulty in introducing it, in consequence of the contracted state of the passage only admitting it to enter in one direction. He then made an incision, commencing opposite the membranous portion of the urethra, and extending along the left side of the anus. This part of the operation, as well as the introduction of the gorget into the bladder, required much care to prevent the rectum from being wounded: the tenesmus and obstinate prolapsus propelling the intestine with great force. The bowel, however, entirely escaped injury, and the incision was made into the bladder in less than half a minute. This was signified by a discharge of urine. The staff being removed, Mr. Coley passed his forefinger into the bladder, and, immediately finding the stone, withdrew the gorget. The stone was afterwards extracted with a small pair of forceps, assisted by the fingers. Notwithstanding the youth of the patient, the narrow limits of the parts operated upon, the oblong shape of the stone, and the consequent difficulty of grasping it in a favourable direction, the whole process was completed in less than ten minutes from the time the boy was placed on the table. Oiled lint was introduced into the wound, a T bandage was applied, and the boy was taken to bed.

At the end of the second day the urine passed through the natural channel, and in fourteen days the wound was healed and the patient allowed to resume his usual exercise and amusements.

ENTROPIUM.

Dec. 1. An elderly woman was admitted with troublesome inversion of the lower eyelid. The hairs, which were constantly irritating the eye, had been removed before she came under Mr. Coley's care, without any benefit. The continual lachrymation attending the disease annoyed her exceedingly and excoriated the cheek. Mr. Coley excised an elliptical portion of the integuments above the tarsus, and united the wound by two silk ligatures, which were taken away at the end of twenty-four hours, when union had been effected, and the disease permanently cured. Mr. Coley prefers this plan to the application of sulphuric acid, as he observes that it leaves no perceptible mark on the skin.

EDINBURGH INFIRMARY.

(From a Correspondent.)

IN the medical wards of the *Royal Infirmary of Edinburgh*, the following most unpardonable neglect exists:—When a patient is admitted, the card, which is placed at his head, notifying his disease, and stating when he was admitted, &c., in every other hospital, that I ever visited, was always filled up; but here it is left blank, and when the physicians go their rounds, they put a few questions to the patient, without making one remark to the student, as to what the disease is, its nature, or its treatment. They also object to the student applying the stethoscope. In fact, everything is done to confuse and impede the student in his study of disease. Yet where is it but in those wards which are appropriated for the reception of the sick that the student is to learn his profession? And how is he to accomplish this without the aid of the physician at the bedside? The physicians, boldly enough, insist upon a regular attendance on the part of the student, the result of which is that the student goes to the wards "to show himself," as it is termed, but quickly returns, to obtain a knowledge of diseases from *books*, and by these means he completes his studies, and enters the world to *practise physic*. The many egregious errors committed by young practitioners in their profession, may be justly attributed to such causes as these. The medical officers to whom I chiefly allude, and who are the cause of rendering a valuable institution almost perfectly useless to pupils, are, I am sorry to say, Professors in the University; but it is quite proverbial in Edinburgh, that when a man obtains a professorial gown, he generally ceases to be of use to the student. It is to be hoped that a remedy for these evils is near at hand.

OPERATION BY MR. SYME.

(From a Correspondent.)

ON Tuesday, the 23rd of January, Professor Syme excised a large tumour of the neck, from a patient in the *Royal Infirmary*. The case was (as all similar cases are) highly interesting. The theatre was filled with students, and the area with Fellows of

the Royal Colleges of Surgeons and Physicians, who had assembled on purpose to witness the operation. The tumour was removed, and the patient dismissed; and *then*, according to the usual custom of this and of every other public hospital, according, also, to Prof. Syme's own custom, in accordance with the orders of the managers, in accordance with courtesy to the students, and in accordance with the civility due from the operator to his colleagues, and to his fellow practitioners who were present, the history of the case should have been explained, the steps of the operation detailed, and the excised tumour exhibited. But as as the patient left the theatre, the following speech was delivered:—"Gentlemen, you already know the history of this case, we shall examine the tumour at our next meeting." Those gentlemen who "knew the history of the case," were evidently a few students only, for the history of the case had been explained only at clinical lectures in the University, and the next meeting plainly alluded to the operator's next clinical lecture. The students from the operator's own class, could not have consisted of a tenth part of the students who were present, and did not, of course, include any one who was entitled to enter the area of the theatre. This speech, therefore, was uncivil to the students attending Prof. Lizars' clinical lectures, and to the many other students who attended from different classes, all of whom had paid money for being instructed in all cases and operations. The rudeness, however, was made palpable to the Fellows of the two Colleges, and those colleagues in office who were present; Mr. Syme, accordingly, walked out of the theatre amidst a volley of hisses.

The students have no redress here. They would not remonstrate with Professor Syme; they never have got, and would not get now, any redress from the self-elected managers of the Infirmary; and therefore they hope that, through THE LANCET, publicity may be given to the treatment to which they are obliged to submit from one who, because he *bought* his situation, instead of gaining it by *talent*, feels entitled to treat them all as I have now described.

NEW POOR-LAW MEDICAL ARRANGEMENTS IN WALES.

MR. CHRISTOPHER LLEWELYN has addressed to us a letter on this subject, from which the following is an extract:—

Inclosed I send to you the arrangement of the Llanffyllin Union. Its extent is not less than *forty miles*, and I am persuaded that every reflecting man will agree with me in opinion that it is *utterly impossible* for medical men to attend the sick-poor of the various districts, composed, as they are, of such extensive and populous parishes. It is, indeed, only the *junior* branches of the medical profession who have the temerity to venture upon such tasks, which they cannot, but should, perform with diligence and ability. Great will be the calamity if cholera, or any other contagious disorder, should unfortunately prevail here. Not only the aged, the infirm, and the destitute would suffer, but also the honest labourer, and those persons who are as dear to him as life itself, would be doomed to die without the aid of medical assistance, in this, as it is called, Christian country. Mr. Commissioner Day, who is well paid, and must consider himself a very fortunate man, I suppose has taken it as a maxim that the larger the union, the greater the strength.

A poor labouring man's wife died in my neighbourhood a short time ago; the Registrar, by some mistake or other, gave the certificate for burial in a wrong name, in consequence of which the messenger was obliged to go back again for a fresh certificate, the distance of eight miles, making in all a journey of thirty-two miles backwards and forwards.

Llanymynech, Shropshire, Jan. 18.

ENGLISH MEDICAL PRACTITIONERS IN FRANCE.

Extract of a Letter from Boulogne-sur-Mer.

You will be surprised to hear that the prosecution against the English doctors is about to be renewed in earnest, and with increased vigour. In consequence of the sensation this iniquitous proceeding produced last year among all classes of society, the authorities deemed it prudent to suspend their operations, and to allow the matter to sleep,—not, however, to sleep eternally, as we all had supposed, but merely to lull into security the apprehensions of the public, with the intention evidently of pouncing upon us when unprepared, and out-rooting us before we should have time to muster our forces. The Commissary of Police, with one of his agents, without previous notice, has entered the different pharmacies, seized on the file on which are kept all the medical prescriptions, on the evidence of which he has drawn up his *procès-verbal*, by which none have escaped, and the affair will be entered on forthwith.

FRACTURES.—M. Thierry lately submitted to the *Royal Academy* the history of a case of fracture of the left arm, which had remained unreduced, and without union, from the 26th of June, 1836, to the 13th January, 1837. A complete cure was obtained by the method of Celsus (rubbing together the ends of the bones) and the permanent starch bandage; the latter was allowed to remain on for seventy days.

MR. BREE AND THE REVEREND SURGEON STEGGALL.

To the Editor of THE LANCET.

SIR:—I feel strongly the necessity of making my reply to Mr. Steggall as brief as possible, in order not to encroach too much on the pages of your Journal.

But, first of all, I deem it proper to say a few words, in order to render it clear to you, as Editor of a public Journal, *why* I am so frequently called upon to defend myself from unjust, illiberal, and false charges made against me in your Journal, which, if answered, would be uselessly occupying your space, and, if unanswered, might subject me to the imputation of being guilty of the charges urged against me.

I am sorry to be obliged to confess, that the animosity of which I have to complain, arises from the enmity of one person, who has opposed me ever since I came to Stowmarket, in consequence of circumstances which, to prevent further controversy, I shall not here further mention. And now to reply to Mr. Steggall.

First. I deny that it is in the power of Mr. Steggall to adduce proof that my conduct at Bildeston, or elsewhere, was, or has been, otherwise than consistent with the character of a gentleman.

Secondly. The name of Scott I remember well, as being connected with a * * * * * * breach of professional etiquette on behalf of * * * *.

Thirdly. I know nothing of a Mr. Green.

Fourthly. Mr. Steggall's assertion about the New Poor Law is somewhat singular, considering that a short time ago he was a candidate for the chaplaincy of the workhouse, and afterwards an applicant to me for some of the parishes in my district.

Fifthly. I never drew teeth or bled for sixpence, and the assertion that I did so is a wilful falsehood.

Fifthly. I did not introduce half-guinea midwifery into Stowmarket. I attended a few cases at that fee when I first settled in this place, but the same thing was done by Mr. Bedingfield's partner and son-in-law before I came to Stowmarket. I have the honour to be, Sir, your obedient servant,

C. R. BREE.

Stowmarket, Feb. 7, 1838.

*** Not another line of comment on the subject of this controversy, which is lapsing into a discussion of a purely private character, shall appear in THE LANCET, excepting on the cover, to be paid for as an advertisement.

CREOSOTE IN CANCER.—Dr. Friese, of Goldapp, assures us, that he employed every kind of treatment in vain, until he thought of applying creosote, in the case of a lady who was affected with cancerous ulceration of the skin covering the calf of the leg. One part of creosote in three of distilled water was applied over the surface of the leg, which quickly became white, and was soon afterwards covered with a thin eschar. The latter was detached on the fourth day, and the sore was covered with healthy granulations. The central part healed up after the third application; the edges, however, did not cicatrise before the lotion had been applied seven times; on the last occasion equal parts of creosote and water were used; the lady was thus perfectly cured.—*Berlin Med. Zeit.*, No. 13, 1837.

M. ROYER-COLLARD, nephew of the great statesman of that name, the founder of the "Doctrine," has just been elected, at Paris, Professor of Public Hygiene, at the close of a long and brilliant concours. Will our Executive ever remain behind the French Government in matters connected with science and public education?

TO CORRESPONDENTS.

Mr. Osborne errs in supposing that any design is entertained by medical reformers of admitting to medical practice young men who are deficient in the chemical and pharmaceutical knowledge which it is proposed to demand from dispensing chemists. There is, in fact, neither desire to prevent, nor reason for preventing, young men going straight from the druggists' shops to the study of medicine in any one of the public or private institutions, and presenting himself afterwards, for examination, before the proper authorities, to act as a physician or a surgeon. As Mr. Osborne has thus mistaken the object which he would attack, we do not insert his letter. Mr. O., in another part of his letter, asks, "Who are the parties that complain against practising chemists and druggists?" and replies, "It is not the great mass of the people, for they are at all times satisfied with the result of druggist's practice." Of course our correspondent is a druggist.

H. B. We do not reply to anonymous correspondents by private letter, directed to specified places. The only remarks that we need to make here are these:—First, the *membership* has nothing to do with qualification. The *license to practise* is the only necessary legal document. Secondly, the "jealous practitioner" is perfectly ignorant of the law. *H. B.* may practise as a surgeon, and act precisely as he represents, without infringing the clauses of any statute, or justly rendering himself liable to the imputations mentioned in his letter.

Letters and communications have been received from *Mr. C. Edwards—Anti-Monopolist—Mr. J. L. Levison*, and *Mr. W. C. Clough*.